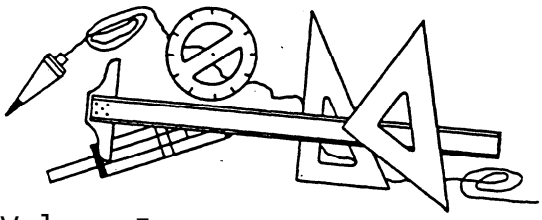
APPENDIX 4



Volume I

BRIDGE CONSTRUCTION MEMO 2-4.0

MISCELLANEOUS INFORMATION AND INSTRUCTIONS

October 7, 1985

BRIDGE DECK CONTOURS AND GEOMETRICS

Plans prepared by the Office of Structure Design contain a "20" scale deck contour plot. A memo in the R.E. Pending File will advise the Structure Representative that he may obtain a 4-scale plot of the contoursupon request. (Attachment #1 of this Bridge Construction Memo is a sample of DS-D134 (Rev. 9/85) which is placed in the R.E. pending File). Structure Representatives wanting 4-scale contour plots should enter the required information on the DS-0134 and return it to the Chief, Office of Structure Construction.

For jobs which do not include a "20" scale deck contour plot in the contract plans, it will be the Structure Representative's responsibility to prepare needed 4-scale contour plots. The Structure Representative may elect one of the following methods to prepare a 4-scale plot of the deck contours:

1. Hand-draw 4-scale contour plots on the job.

2. Submit input information to obtain 4-scale contour plots through the computer program (computer program 2-4, "Bridge Deck Geometric").

3. Submit a written request to the Chief, Office of Structure Construction requesting that the 4-scale contour plot be prepared and furnished by the Office of Structure Design. This request should give the following information: Bridge name and number; Design Group as shown on the plans; Number of blue-line copies needed for each structure.

Date:

Project:

To: Office of Structure Construction
R. E. Pending File

The Computer data for the following bridges on the above project are on file with the Office of Structures Design, Design Section_____ in Sacramento.

We will send you "d-scale" computer printouts of the Deck Contours at your request.

SR ✓	Bridge Name	Bridge Number

Project Engineer

SR: Return this form to:

Chief,Office of Structure Construction
P.0. Box 942874
Sacramento, CA 94274-0001

It is requested that the original and _____ "blue line" copies of the Deck Contours for the structures checked above be sent to me at the following address:

Structure Representative

Falsework Release Instructions

(For cast-in-place concrete girders only)

FALSEWORK RELEASE

Alternative 1:

Falsework shall be released as soon as permitted by the specifications. Closure pour shall not be placed sooner than 60 days after the falsework has been released.

Alternative 2:

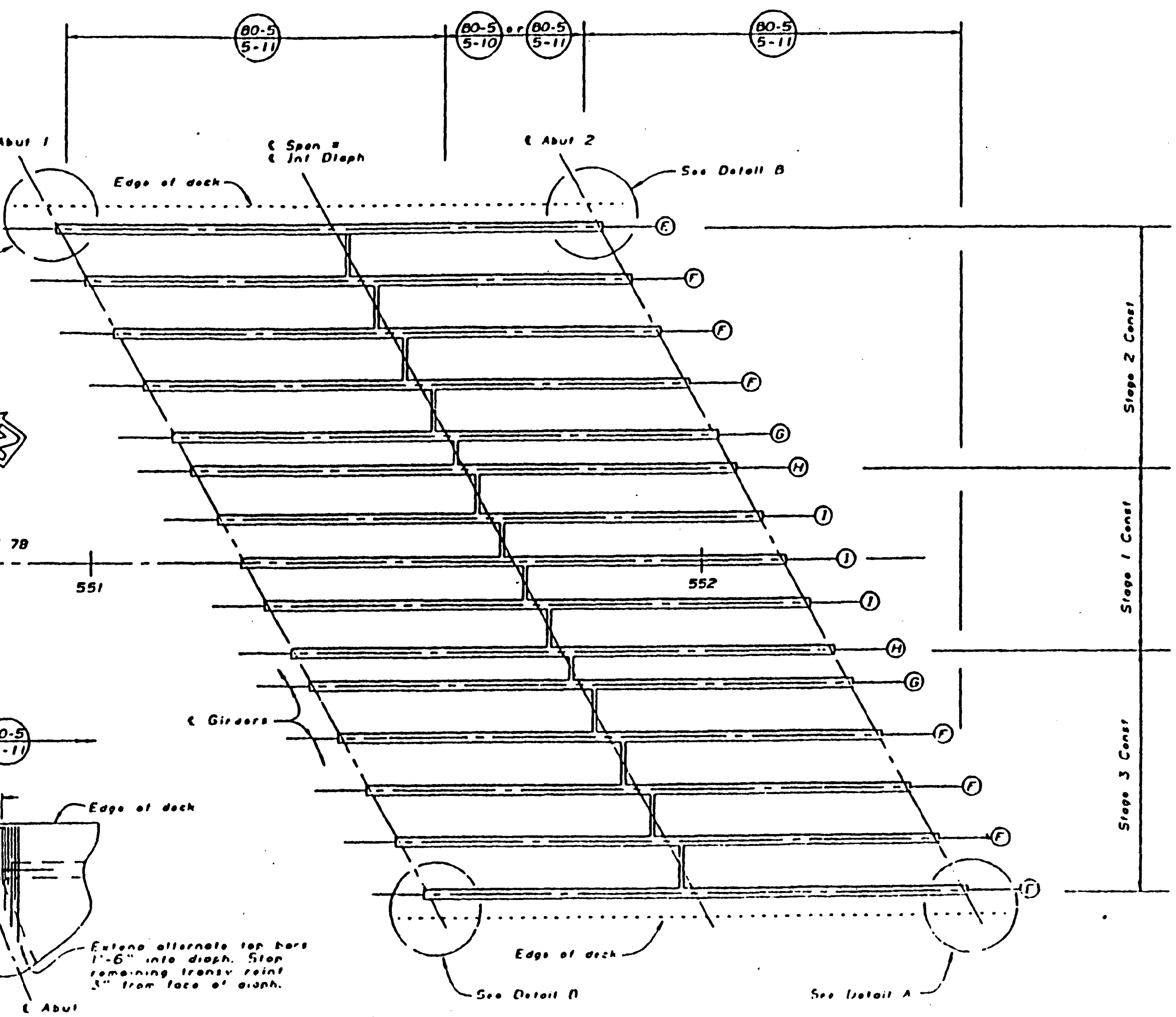
Falsework shall not be released less than 28 days after the last concrete has been placed. Closure pour shall not be placed sooner than 14 days after the falsework has been released.

When Falsework Release Alternative 2 is used, camber values are 0.75 times those shown.

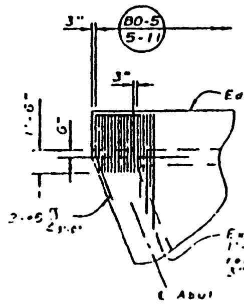
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	78			

REGISTERED ENGINEER - CIVIL

PLANS APPROVAL DATE



PLAN



DETAIL A

No Scale

PRESTRESSING NOTES

Working Force: The force required at center of span after all losses.

Concrete Strength: f'ci is at time of initial stressing. f'c is at 28 days, psi.

Camber: Girder camber immediately after the deck and barriers have been placed.

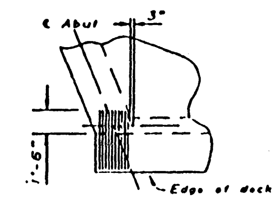
Screed line elevations for deck concrete will be determined by the Engineer.

Contractor may interpolate "P" and "X" values between limits shown, as approved by the Engineer.

GIRDER DESIGNATION AND LENGTH	P=WORKING FORCE IN KIPS		CONCRETE STRENGTH		GIRDER CAMBER @ ℄ SPAN
	"X"		f'ci	f'c	
Ⓔ 89'-9"	4"	920	5000	5700	-0.03'
	6"	1000	5000	5700	-0.02'
ⒻⒼ 89'-9"	4"	870	6000	6000	-0.01'
	6"	920	5600	5600	-0.02'
ⒽⒾ 89'-9"	4"	810	5400	5600	-0.03'
	6"	840	5300	5800	-0.01'

NOTE:

Camber values are based on 9 weeks elapsed time between stressing girders and placing of deck.



DETAIL B

No Scale

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN

57-303
9.85

SMILAX DR UC - REPLACE

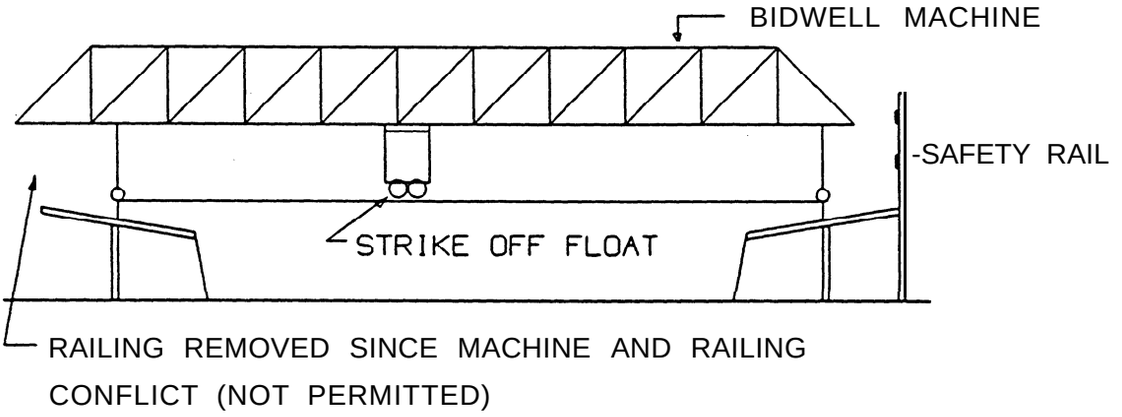
GIRDER LAYOUT

14 | 18

BRIDGE DECK SAFETY

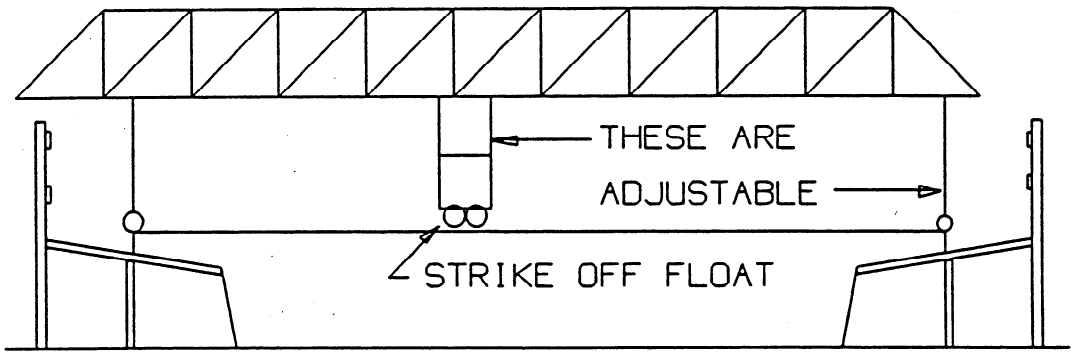
Frequently the Contractor will want to remove the safety railings along the edge of deck if they conflict with his deck finishing machine. Deck finishing machines usually come in sections approximately 10 feet. If the width of the bridge deck is say 32 feet, then the machine must be made up of 4 sections or 40 feet. This meansthat 8 feet must hang over one side of the bridge or the other. Since the machine may not be high enough to pass over the top of the railings, the Contractor may want to remove a portion of the safety rail. See Figure 1.

FIGURE 1



One solution to this problem is shown in Figure 2. The legs of these machines are adjustable and will allow the machine to be elevated high enough to pass over the top safety railings eliminating the need to remove the railings. The strike off float must be lowered to make up the difference. This can be accomplished on most modern Bidwell machines without any modifications or problems.

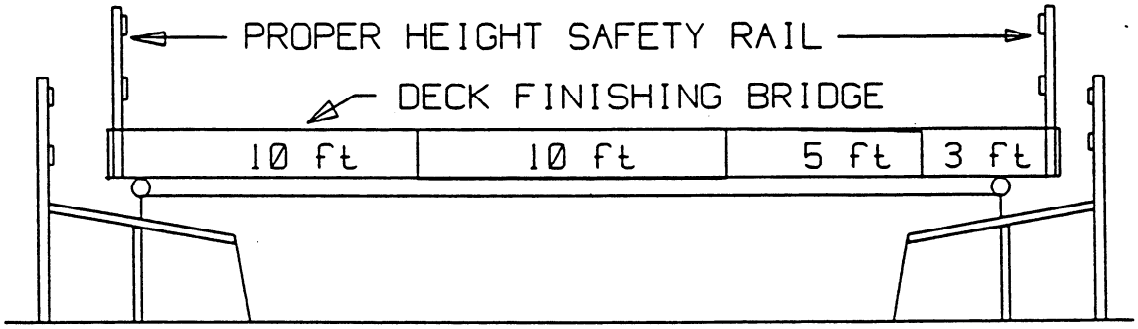
FIGURE 2



NO NEED TO REMOVE RAILINGS WITH MACHINE ELEVATED

The next problem we encounter is with the deck finishing bridges. These are the bridges which span the freshly placed concrete immediately behind the deck finishing machine. Older finishing bridges come in 10 feet sections that can not be raised to clear the safety railings. This problem can be solved by having shorter sections made up, say a five footer and a two or three footer, as shown in Figure 3.

FIGURE 3

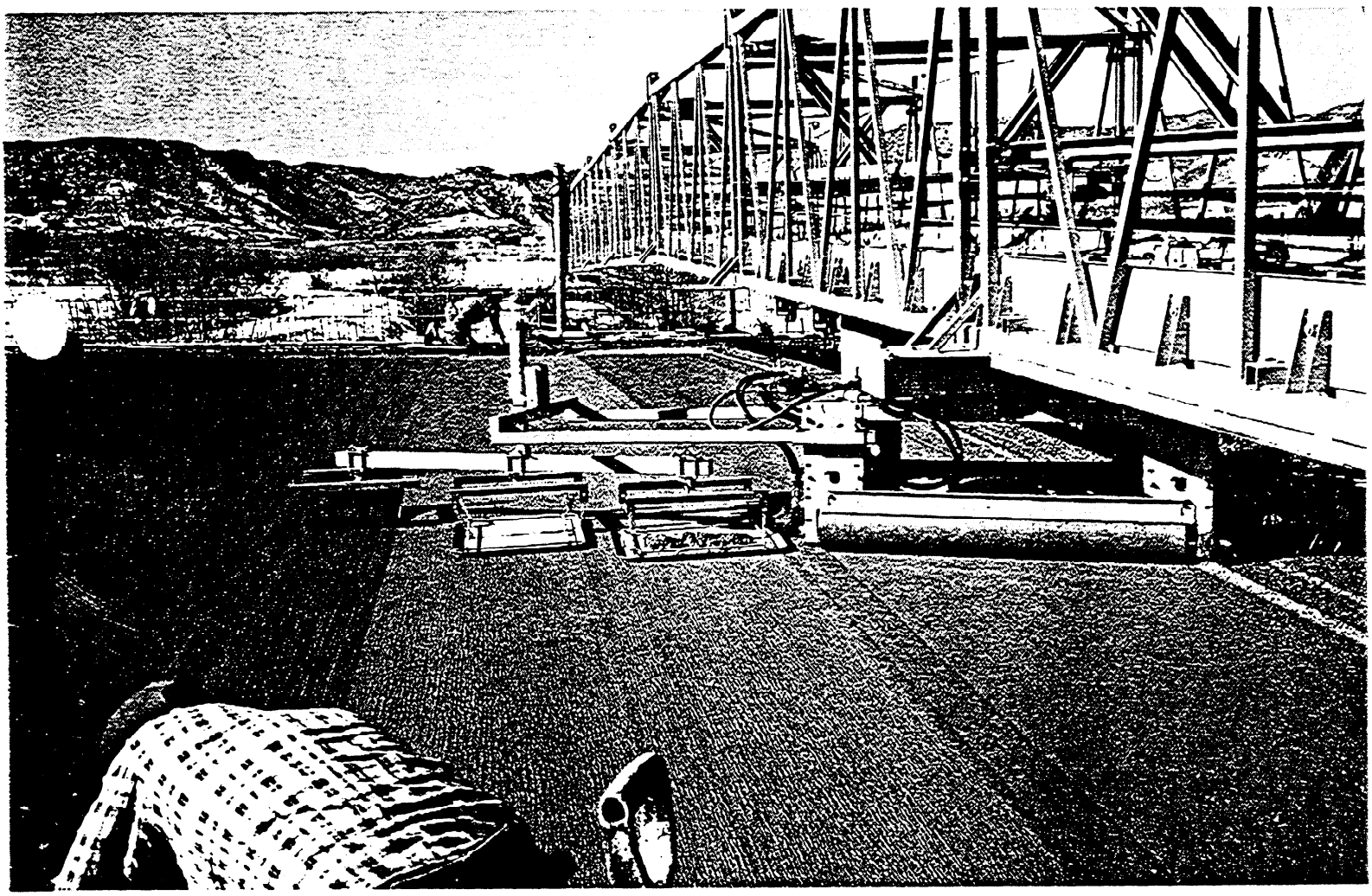


Most modern finishing bridges are internally telescopic which allows them to be adjusted to almost any width. Another problem with finishing bridges is that the safety railings are no longer 42 inches high to the men on the finishing bridges. It is probably more like 16 inches from the top of the finishing bridge to the top of the safety railings. This means that the Contractor needs to make up metal brackets which will hold a 42 inches high safety rail to the ends of the finishing bridge.

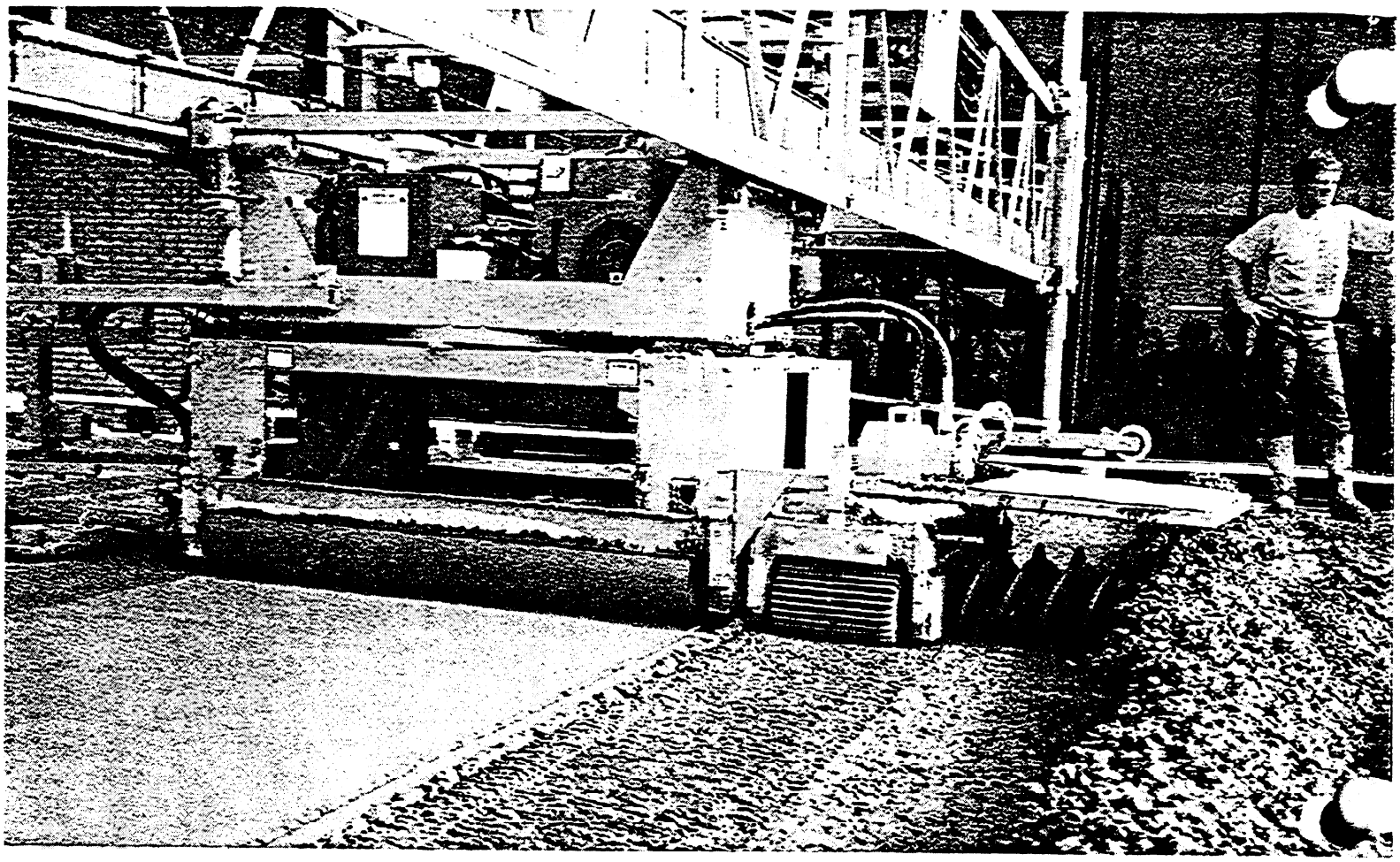
BID-WELL®

CONCRETE FINISHERS

BRIDGE DECKS • OVERLAYS
STREETS • CANALS



HIGHEST PRODUCTION
BEST CONCRETE FINISH
MOST VERSATILE MACHINE



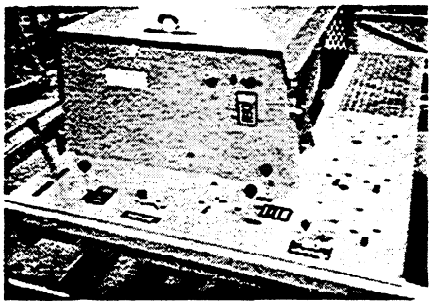
These features give the BID-WELL its finishing superiority

The Bid-Well Roller Finisher produces a finished concrete surface of superior quality. at a high production rate, and incorporates exclusive design features that make it the best roller finisher ever offered to the constructron industry.

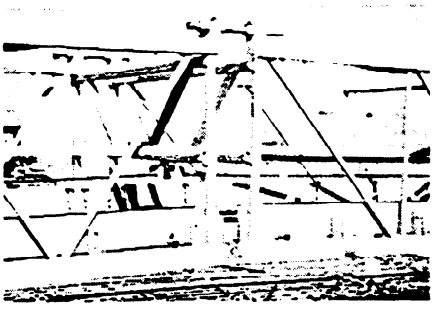
Bid-Well's all-welded steel construction gives you strength with a minimum of weight. The truss sections are pin-connected to give you the fastest set-up time and complete crownability.

1. Rollers automatically reverse direction of rotation or the operator may choose to run one roller in the opposite direction to finish concrete on each carnage pass
   This seals the surface and gives you a smoother finish.
2. Adjustable dual. augers strike off and plow excess concrete forward on every pass. The exclusive quick auger height adjustment feature leaves the proper amount of concrete for the roller to finish for all slumps.
   This gives you better product/on. reduces labor.
3. Reversible dual rollers give twice the finishing action. They also finish to the curb steel on bridge decks. to an existing curb for overlay work. or over the forms for paving.
   This speeds up production and gives a better finish.
4. As each finishing pass is completed. the machine moves forward automatically to reposition the roller for the next finishing pass A patented B -Well feature.
   This gives maximum Juction with the roller continuously finishing.
5. Power is supplied by two interchangeable 14 HP (10.4KW). 16HP (11.9KW). 20HP (14.9KW). or 23HP (17.2KW) Kohler air-cooled engines.
6. Complete versatility
   - Molds all sections-flat slabs or parabolic, rooftop and inverted crowns. Bid-Well's simple. efficient crowning system rapidly crowns the truss at any hinge point. This system is patented by Bid-Well. Optional is a powered crown adjuster for on-the-go crown changes. controlled from the operator's console.
   - Finishes tapered slabs of varying widths.
   - Adjusts to finish maximum skews with a 36O° carriage turntable.
   - Finishes severe superelevations or slopes. Reversible finishing rollers can be quickly changed to rotate in one direction only to finish going upgrade on superelevations or finish skews.
   - Meets all specified tolerances, as strict as **1/8"** (3mm) in 20 feet (6 meters).
7. Easy operator control -
   - Operator's seat at the control panel keeps him clear of the carnage movement for maximum efficiency and safety.
   - The operator may stop or reverse the carnage movement at any point.
   - Augers and roller rotation may be controlled stopped from the front Or rear of the machine by a lever located on the carnage.

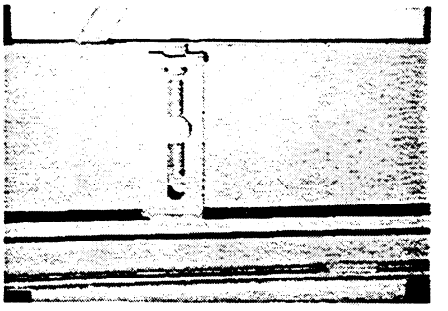
STANDARD FEATURES



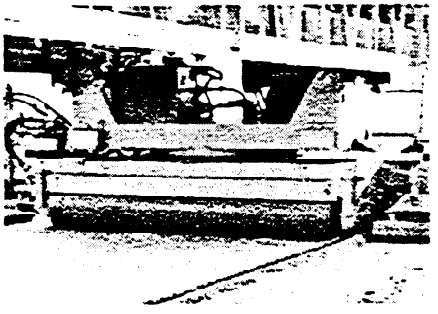
Easy-to-operate control console, showing blanks for optional accessories.



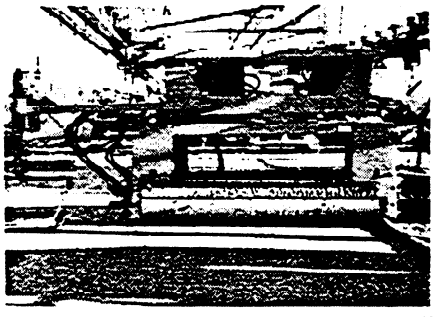
Fast, simple crown adjustment at any hinge point.



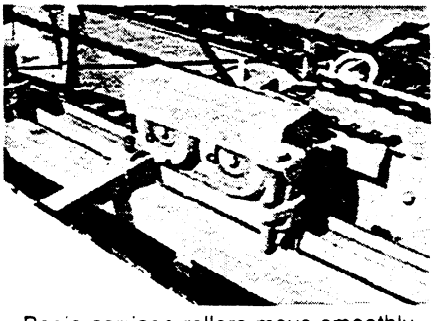
Carriage travel rail adjuster.



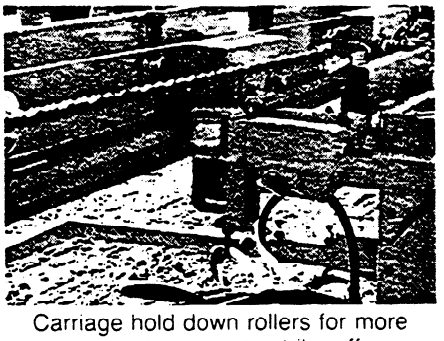
Variable carriage travel speed.



Automatic roller reversal on each pass, if wanted.

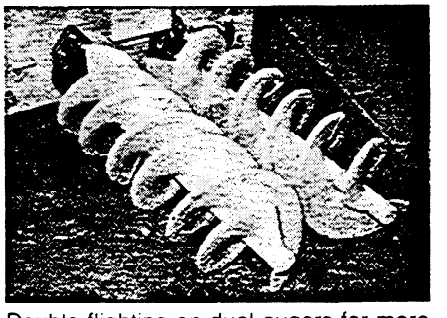


Bogie carriage rollers move smoothly through joints and over crowns.

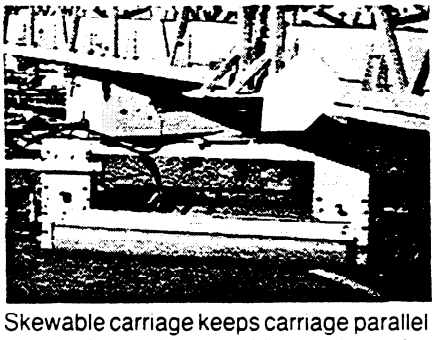


Carriage hold down rollers for more accurate concrete strike-off.

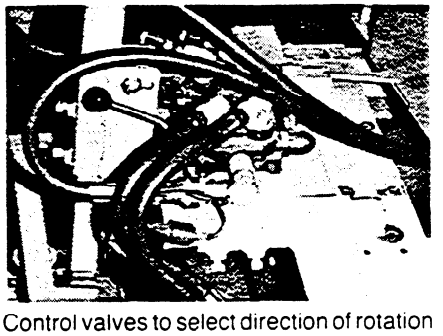
Rapid height adjustment for dual augers.



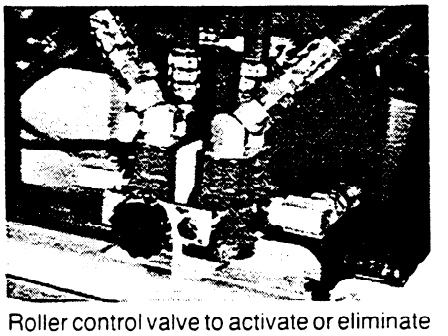
Double flighting on dual augers for more accurate concrete strike-off.



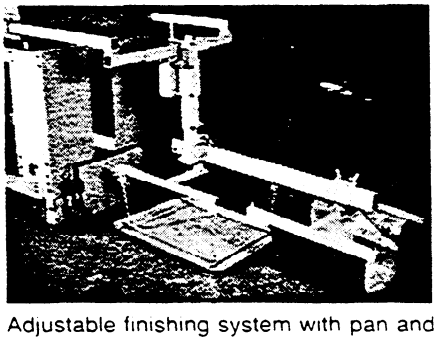
Skewable carriage keeps carriage parallel to roadway when machine is skewed.



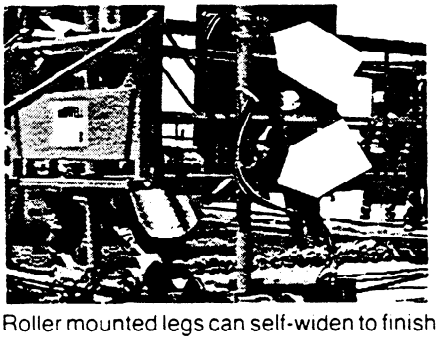
Control valves to select direction of rotation of individual rollers.



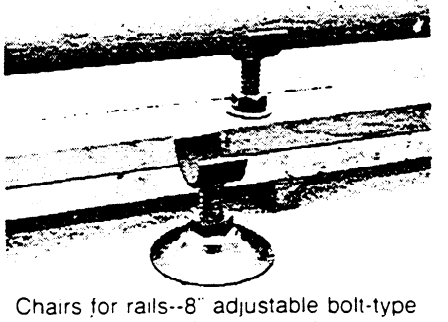
Roller control valve to activate or eliminate reversing action.



Adjustable finishing system with pan and drag.

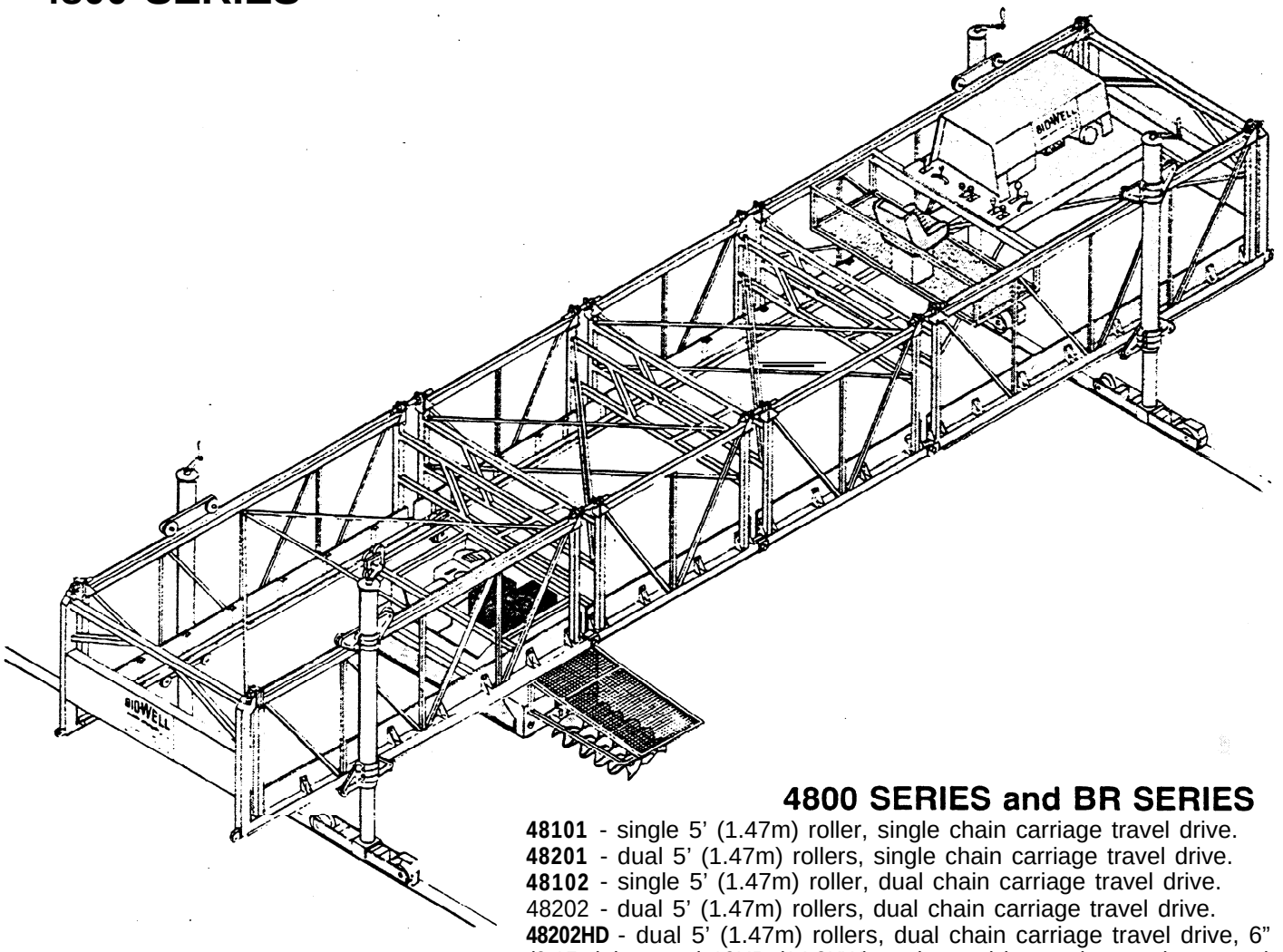


Roller mounted legs can self-widen to finish tapered decks and slabs.



Chairs for rails--8" adjustable bolt-type chair or self-standing chair.

4800 SERIES

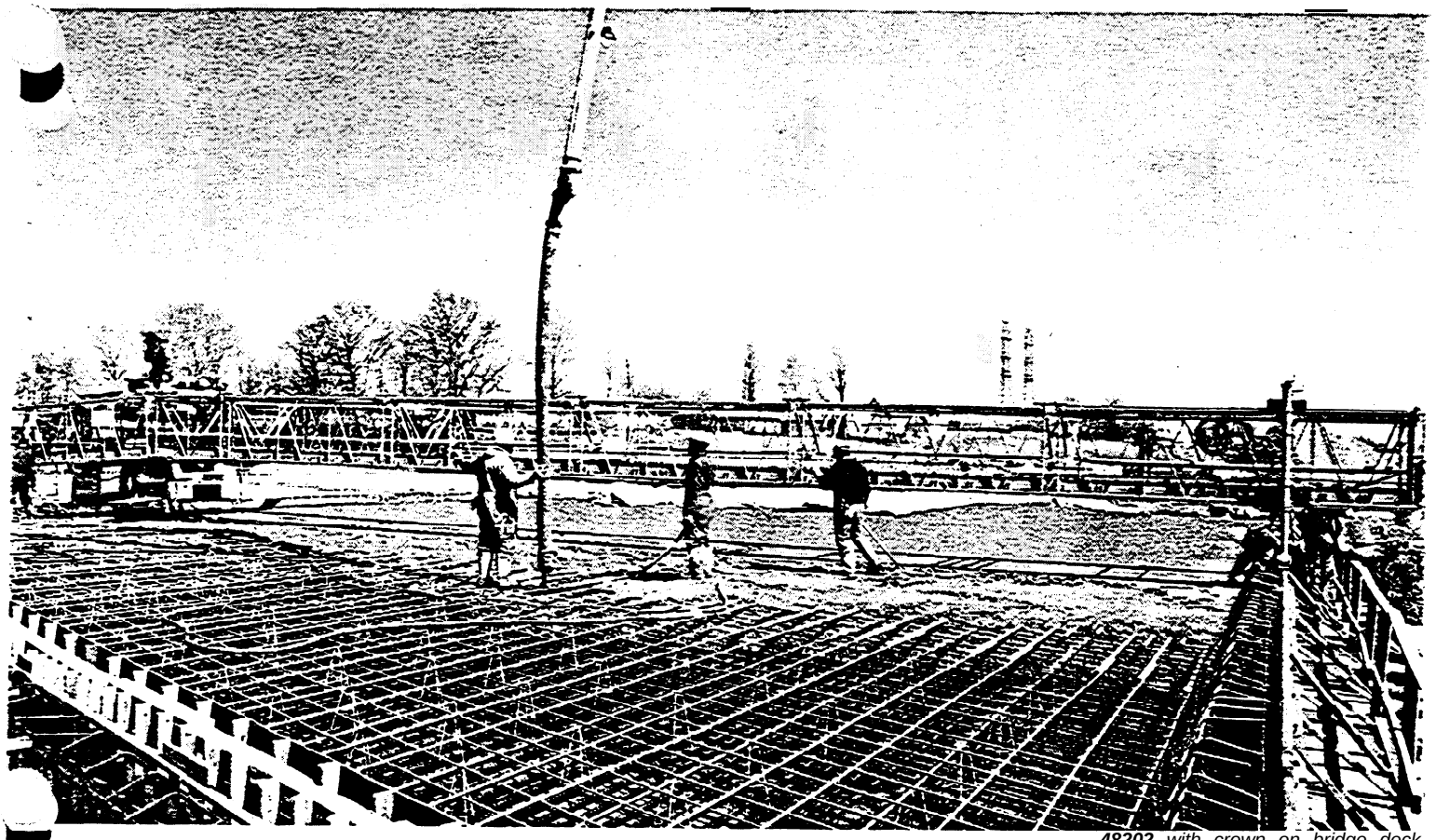


4800 SERIES and BR SERIES

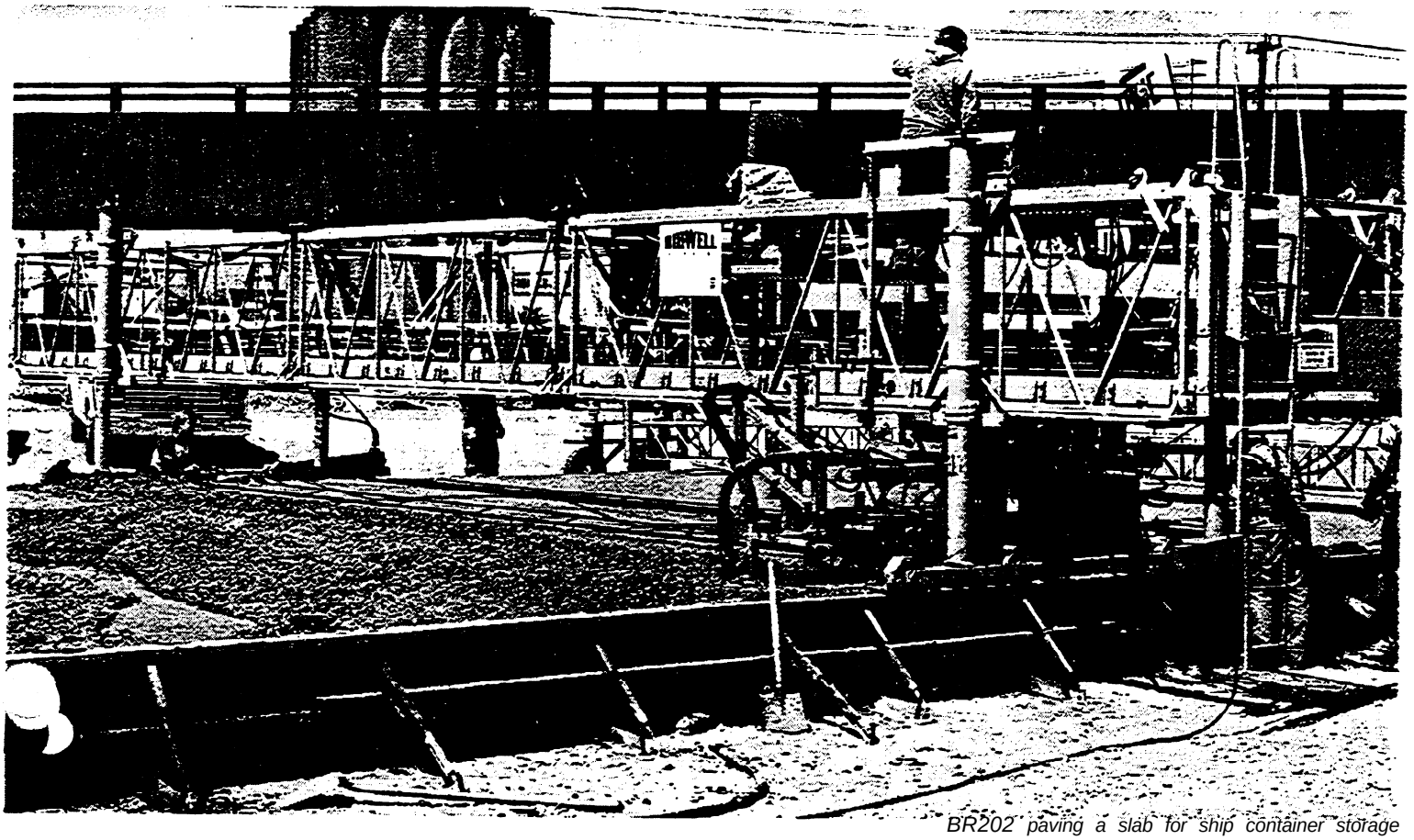
48101 - single 5' (1.47m) roller, single chain carriage travel drive.
48201 - dual 5' (1.47m) rollers, single chain carriage travel drive.
48102 - single 5' (1.47m) roller, dual chain carriage travel drive.
48202 - dual 5' (1.47m) rollers, dual chain carriage travel drive.
48202HD - dual 5' (1.47m) rollers, dual chain carriage travel drive, 6" (0.15m) legs and 19HP (14.2KW) engine and heavy duty carriage travel motor.

SPECIFICATIONS common to the above:

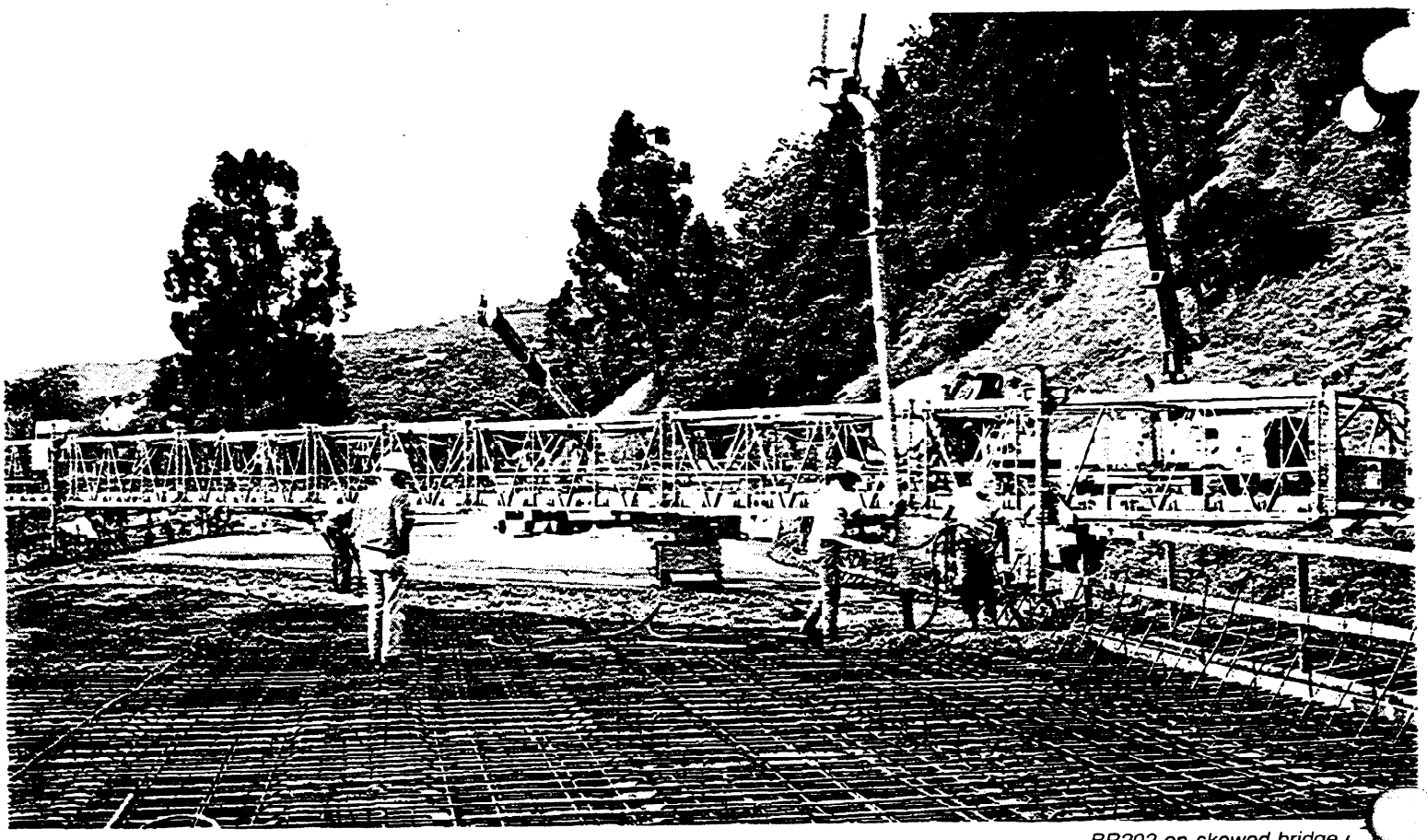
1. Basic 36' (11.Om) unit made up of square end sections, 48*'(1.22m) deep truss.
2. With up to 15' (4.6m) of leg travel on each 18' (5.5m) end section.
3. Crown may be changed at any hinge point or at any travel rail adjuster.
4. By adding 3'(0.9m), 6'(1.8m), 12'(3.7m), 15'(4.6m) or 18'(5.5m) inserts the basic machine can finish 130'(39.6m) wide. No extra overhead truss required.
5. Powered by two 16HP (11.9KW) Kohler air cooled engines, standard (other options available).
6. Dual 24" (0.61 m) quick crank augers with double flighting.
7. Independent roller rotation valve kit with automatic skew cylinder.
8. Variable speed carriage travel up to 80' (24.4m) per minute.
9. Independent hydraulic direct drive motor on each roller.
10. Easy-to-operate control console with swivel seat for operator.
11. Manual override to stop and reverse carriage at any point.
12. Eight bogie rollers on carriage with hold down rollers to prevent floating.
13. Four machine travel bogies with wheels at 48" (1.22m) centers on each bogie on legs 84" (2.13m) (88" (2.23m) on BR series). Making the total span of the wheels 132" (3.35m) in 4800 series (136" (3.45m) in BR series)
14. Crank adjustable finishing pan with astro grass or burlap drag.
15. Flat flanged wheels or concave wheels.
16. Standard carriage travel motor.
17. 4" (0.1Om) heavy duty legs.



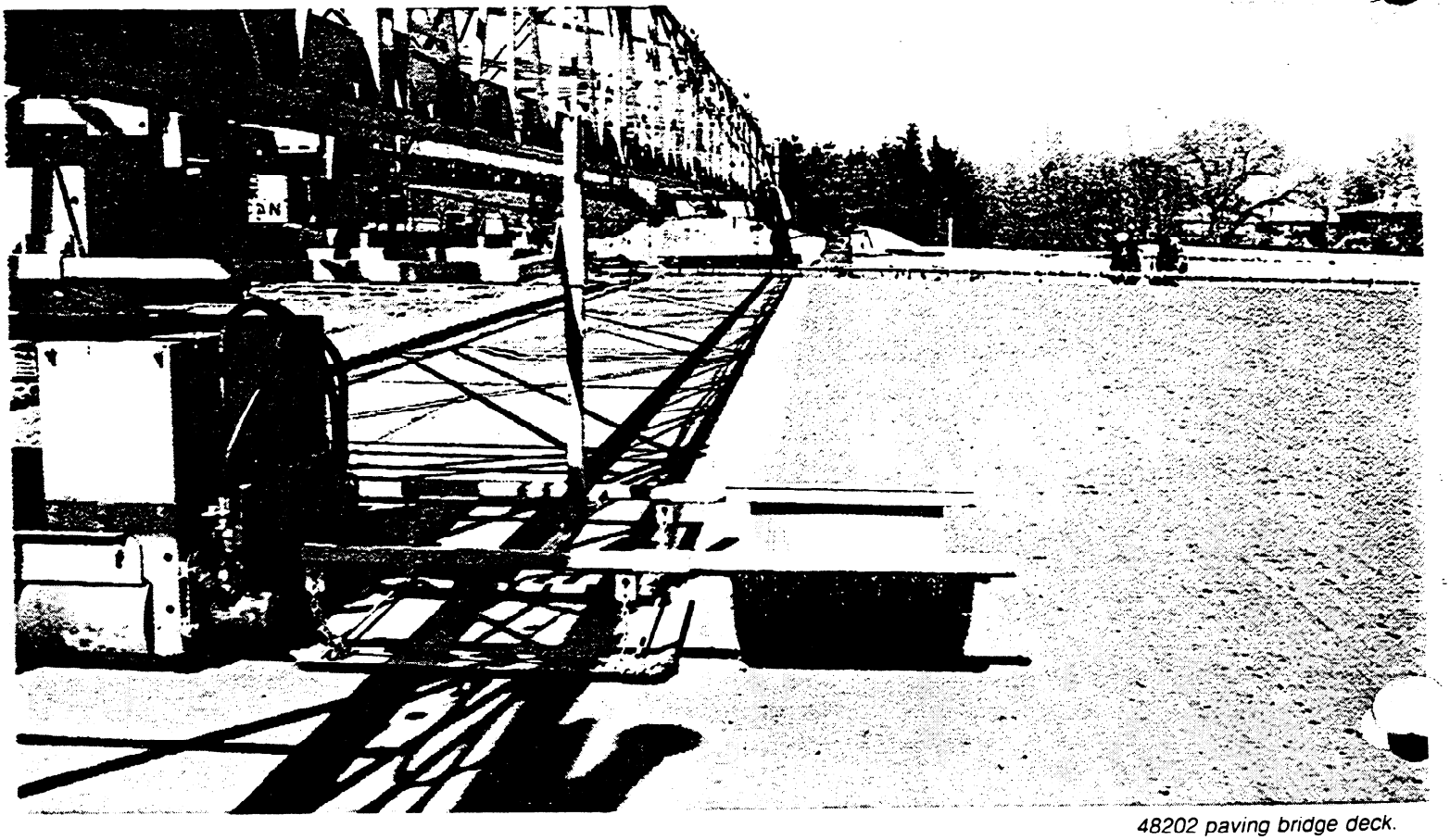
***48202** with crown on bridge deck*



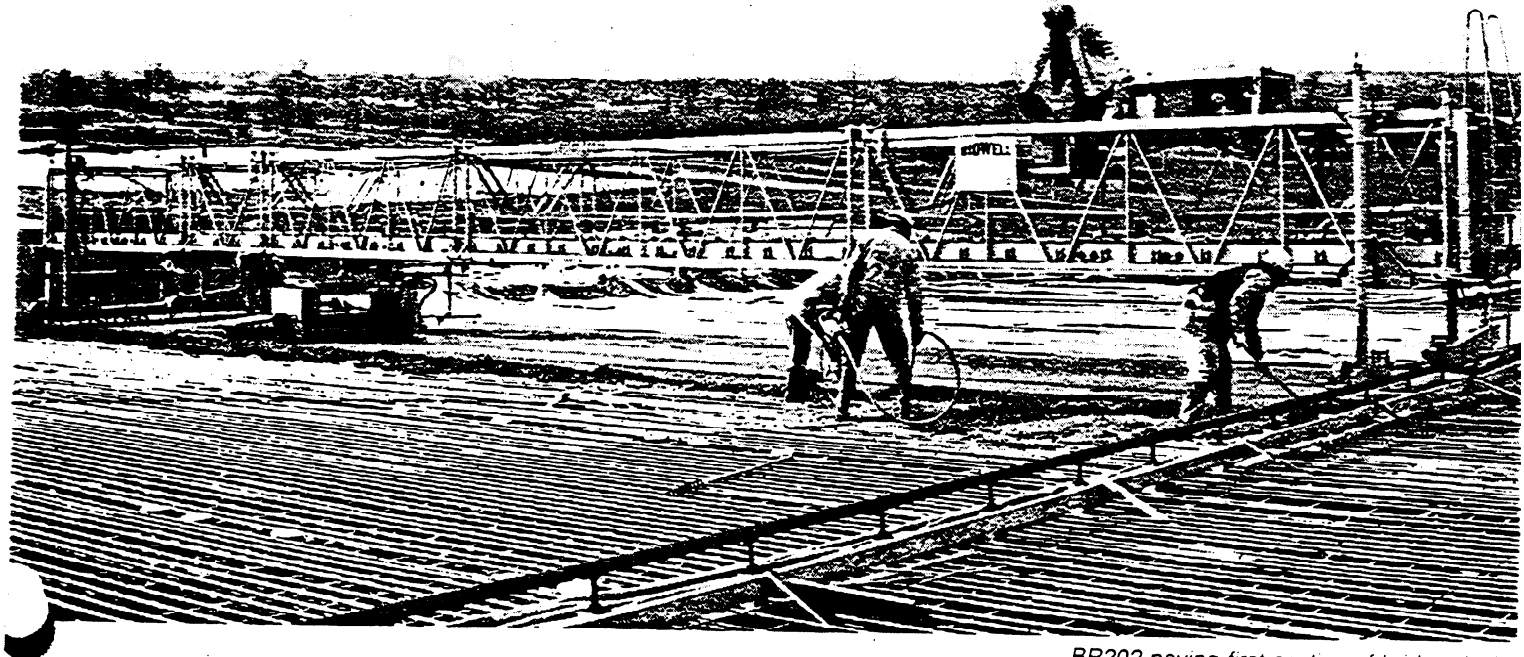
BR202 paving a slab for ship container storage



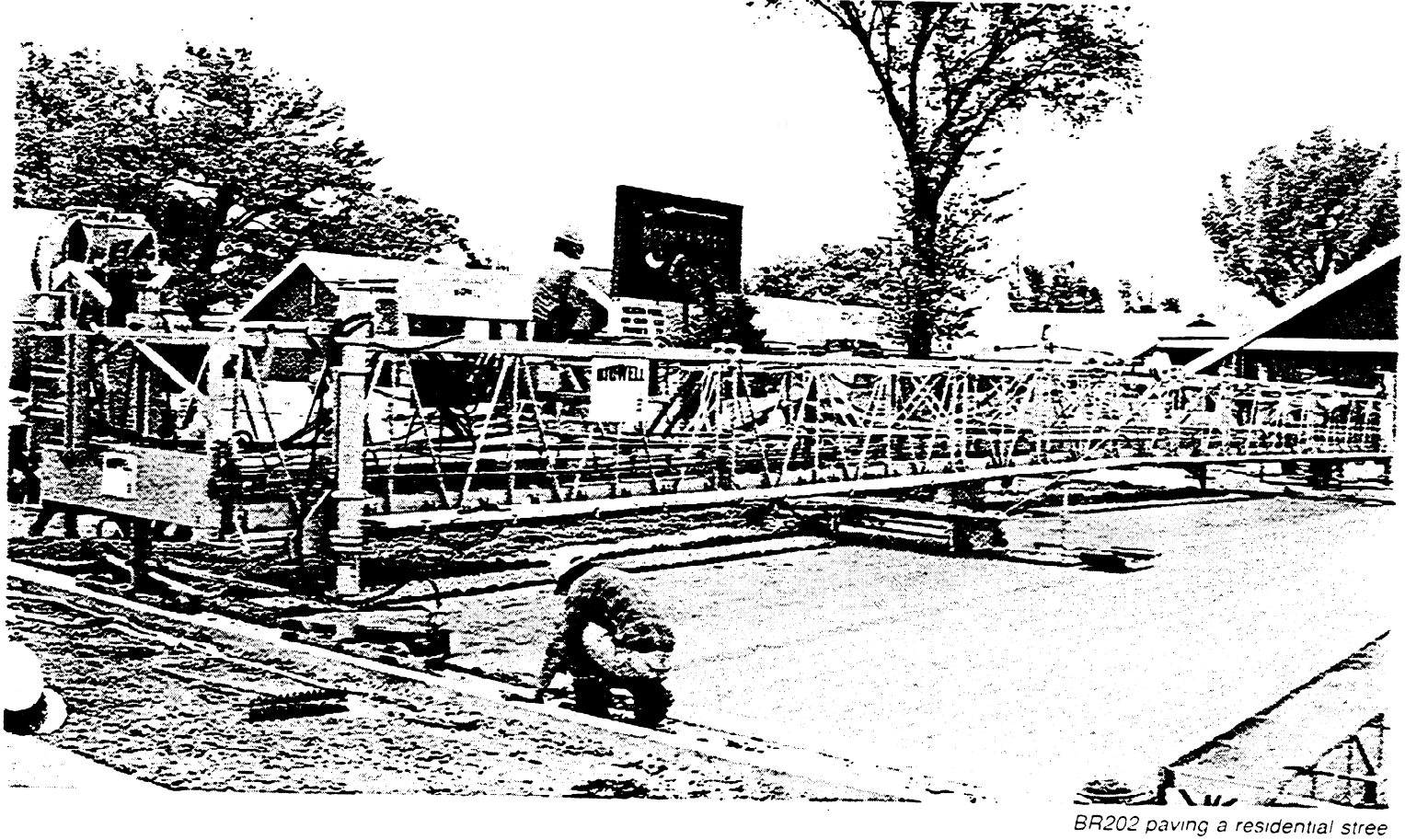
BR202 on skewed bridge



48202 paving bridge deck.

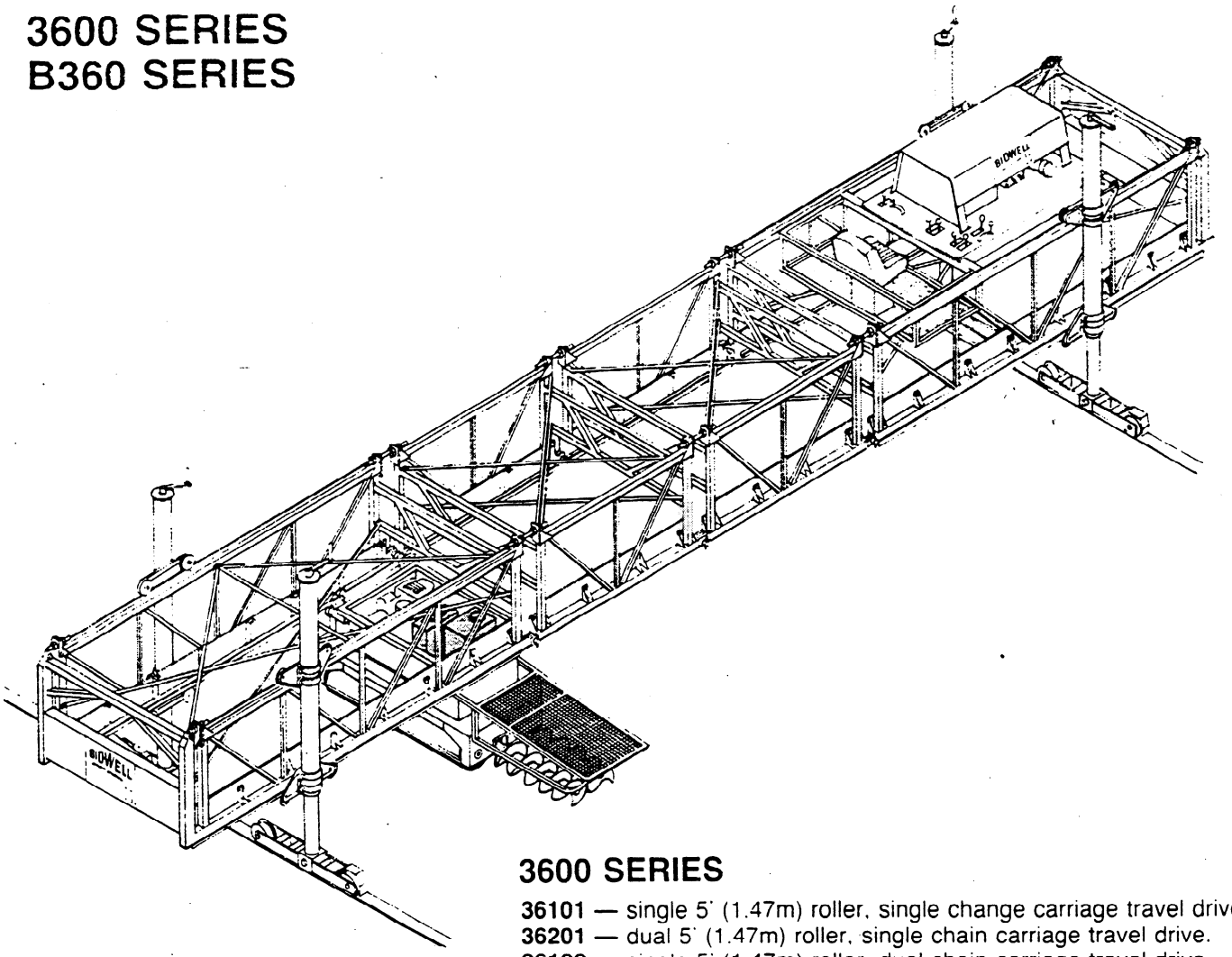


BR202 paving first section of bridge deck.



BR202 paving a residential stree

3600 SERIES
B360 SERIES



3600 SERIES

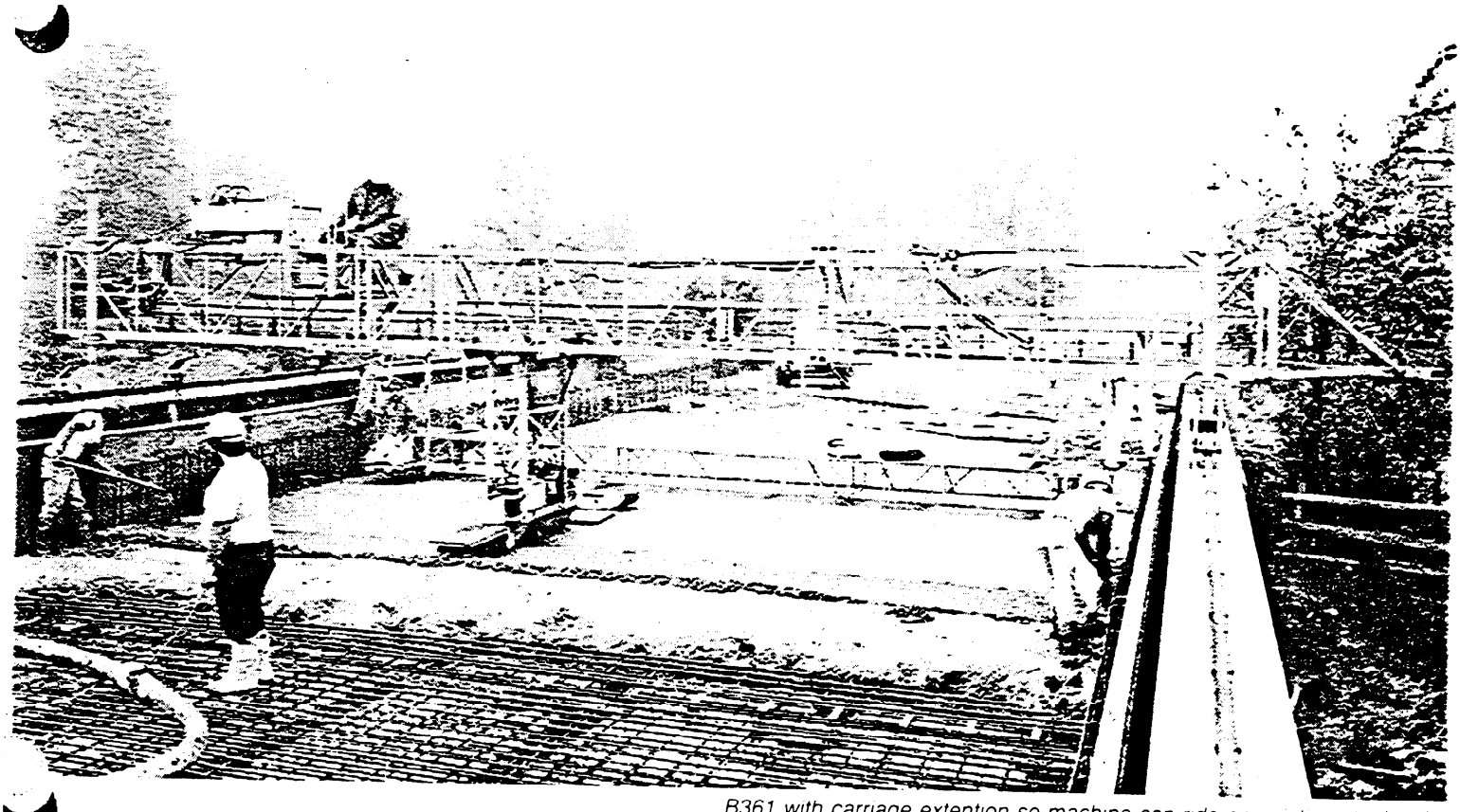
36101 — single 5' (1.47m) roller, single change carriage travel drive.
36201 — dual 5' (1.47m) roller, single chain carriage travel drive.
36102 — single 5' (1.47m) roller, dual chain carriage travel drive.
36202 — dual 5' (1.47m) roller, dual chain carriage travel drive.
36202HD — dual 5' (1.47m) rollers, dual chain carriage travel drive, 6" (0.15m) legs and 2-16HP (11.9KW) engines and heavy duty carriage travel motor.

B360 SERIES

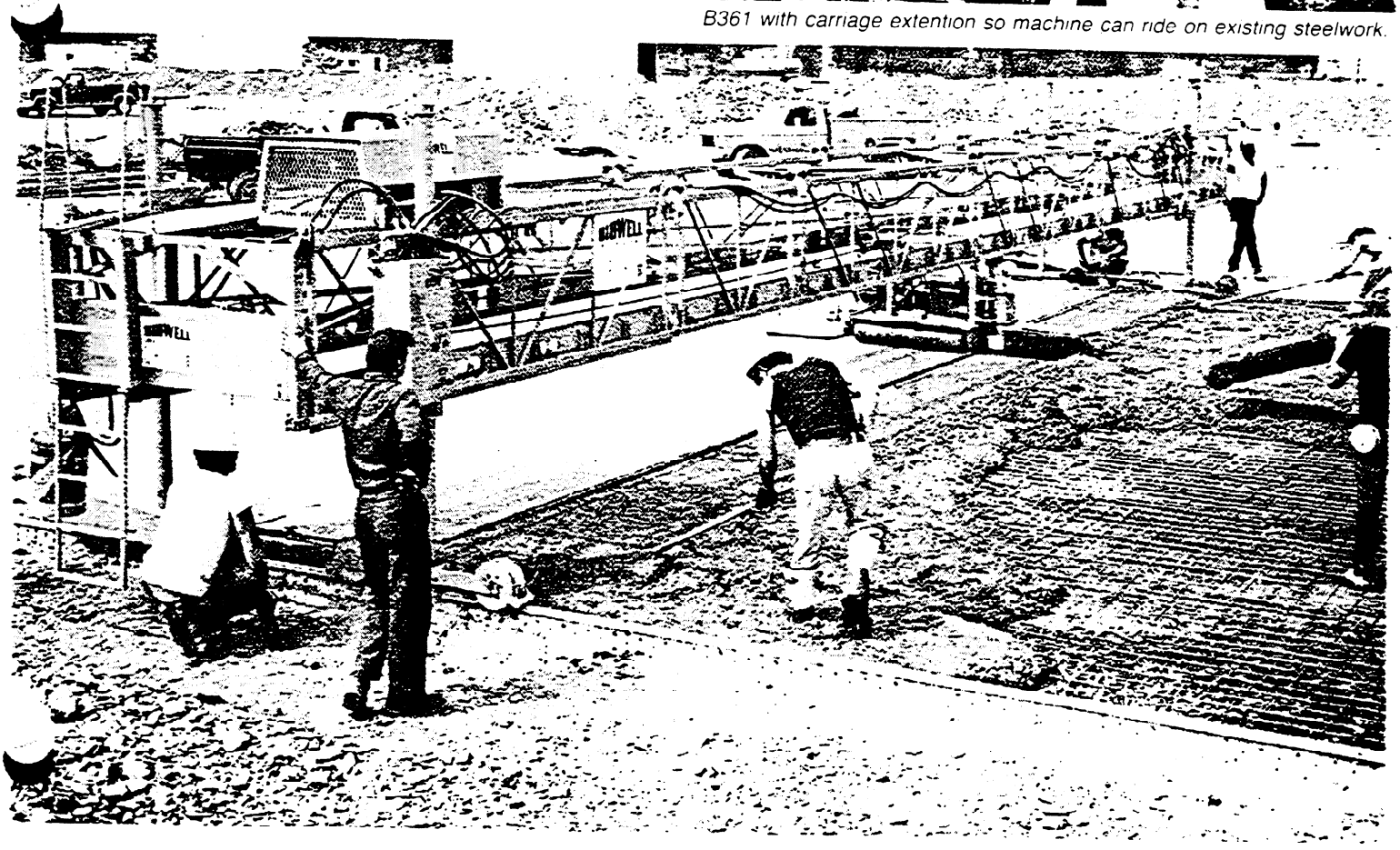
B361 — single 4' (1.22m) roller, single chain carriage travel drive.
B362 — dual 4' (1.22m) roller, single chain carriage travel drive.
2" — 14HP (10.4KW) Kohler air-cooled engines.

SPECIFICATIONS common to the above:

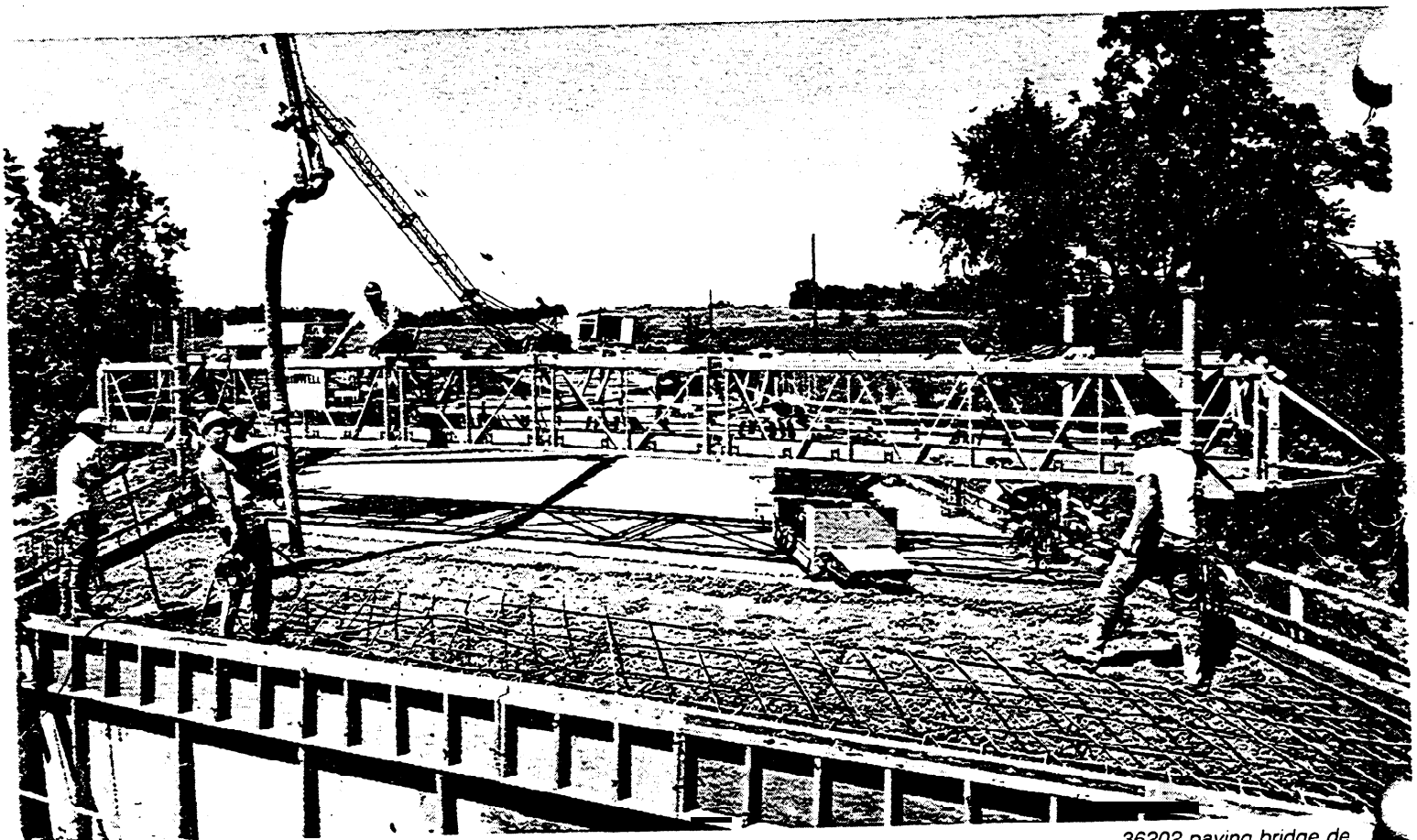
1. Basic 36'(11 .0m) unit made up of square end sections. 36"(0.91 m) deep truss.
2. With up to 15(4.6m) of leg travel on each 18'(5.5m) end section.
3. Crown may be changed at any hinge point or at any travel rail adjuster.
4. By adding 3'(0.9m). 6'(1.8m). 12'(3.7m). 15'(4.6m) or 18'(5.5m) inserts the basic machine can finish 100'(30.4m) wide. No extra overhead truss required.
5. 3600 powered by two 16HP (11.9KW) Kohler air-cooled engines. 8360 series powered by two 14HP (10.4KW) Kohler air-cooled engines. Other options available.
6. Dual **24"** (0.61m) quick crank augers with double flighting.
7. Independent roller rotation valve kit with automatic skew cylinder on 3600 series.
8. Variable speed carriage travel up to 80' (24.4m) per minute.
9. Independent hydraulic direct drive motor on each roller.
10. Manual override to stop and reverse carriage at any point.
11. Eight bogied carriage rollers with hold down rollers to prevent floating on 3600. Four single carriage rollers on 360.
12. Four machine travel bogies with wheels at 36" (0.91 m) centers on each bogie on legs 67" (1.70m) apart. Making the total span of the wheels 103" (2.6m) out to out.
13. Crank adjustable finishing pan with astro grass or burlap drag.
14. Flat flanged wheels or concave wheels.
15. 4" (0.10m) heavy duty legs.



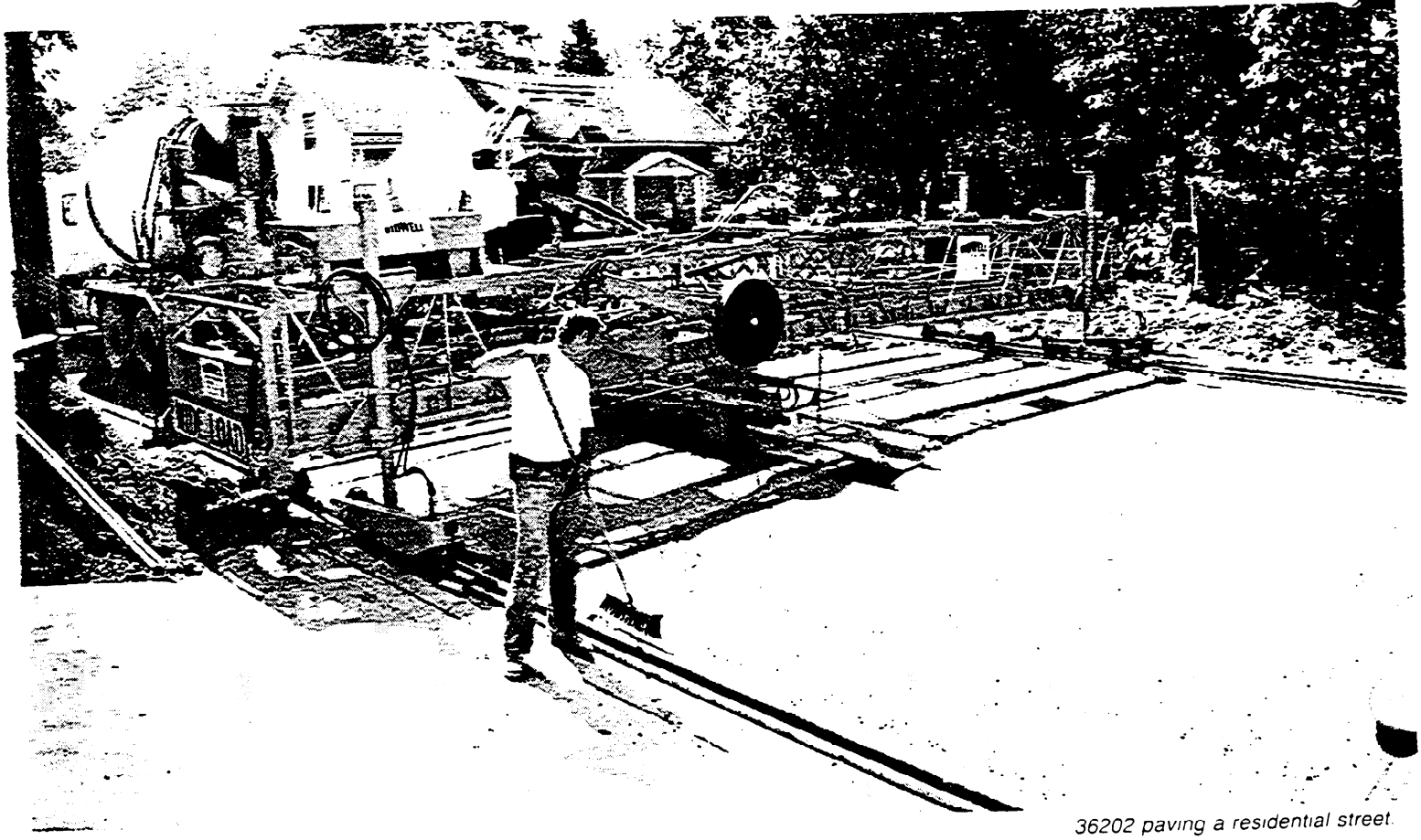
B361 with carriage extention so machine can ride on existing steelwork.



B362 paving.

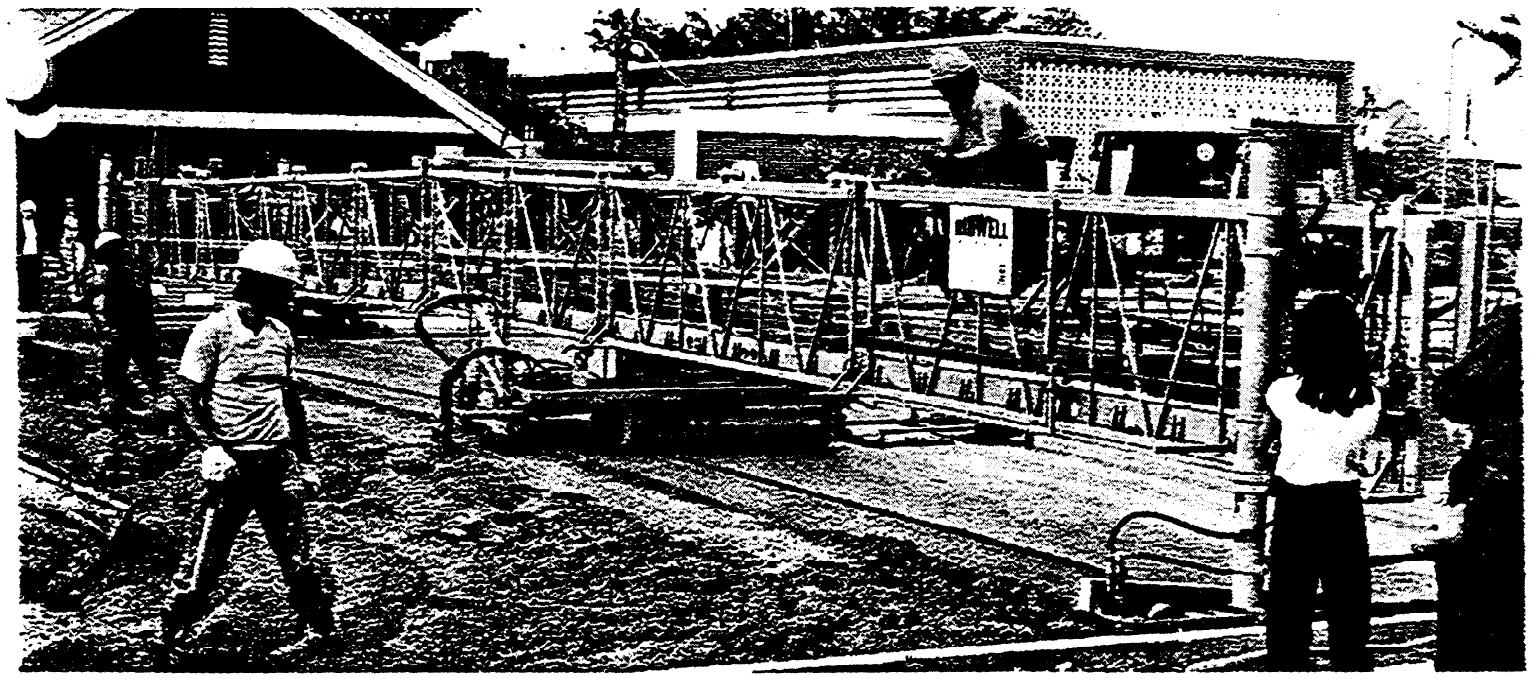


36202 paving bridge de

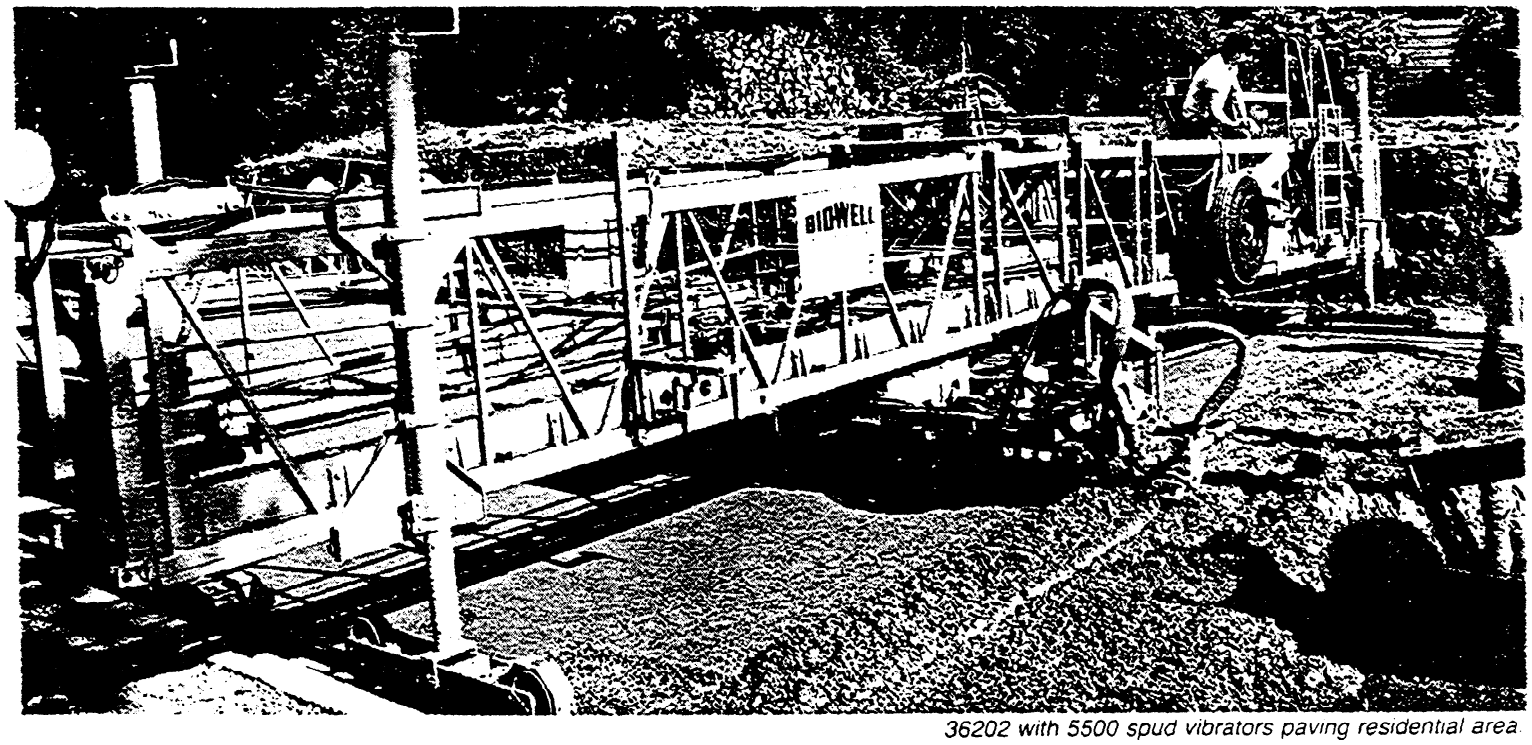


36202 paving a residential street

OPTIONS AVAILABLE



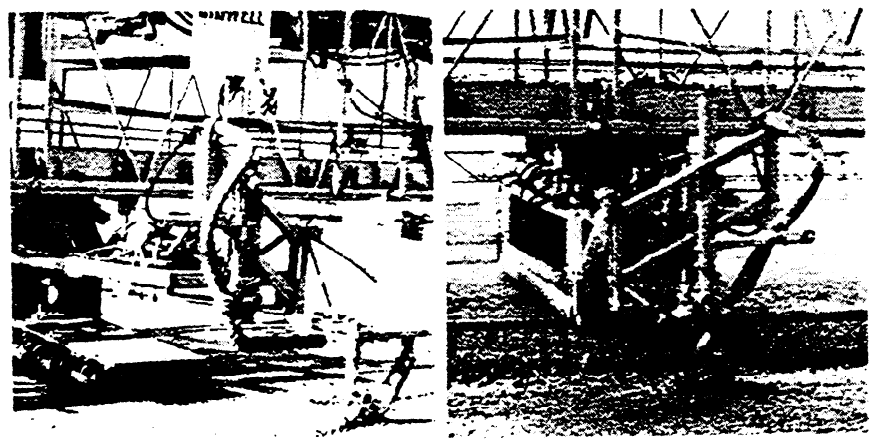
48202 with 5500 spud vibrators paving a city street.

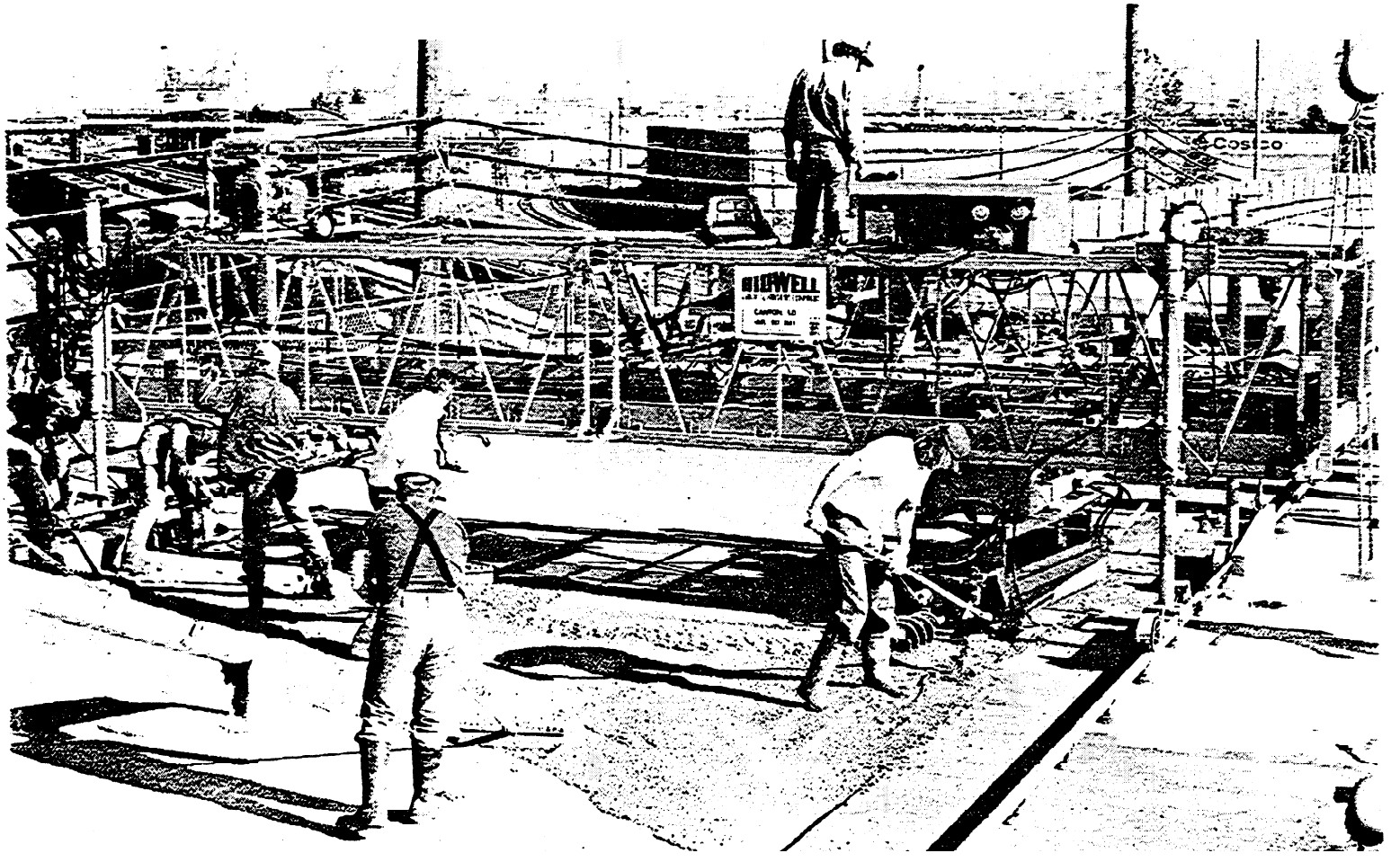


36202 with 5500 spud vibrators paving residential area.

5500 spud vibrators to vibrate concrete on slabs

Another Bid-Well original are twin spud vibrators ahead of the leveling augers. Each vibrator alternately lowers into the concrete as the other vibrator is raised, It follows and consolidates. operating automatically in the direction of carriage travel.





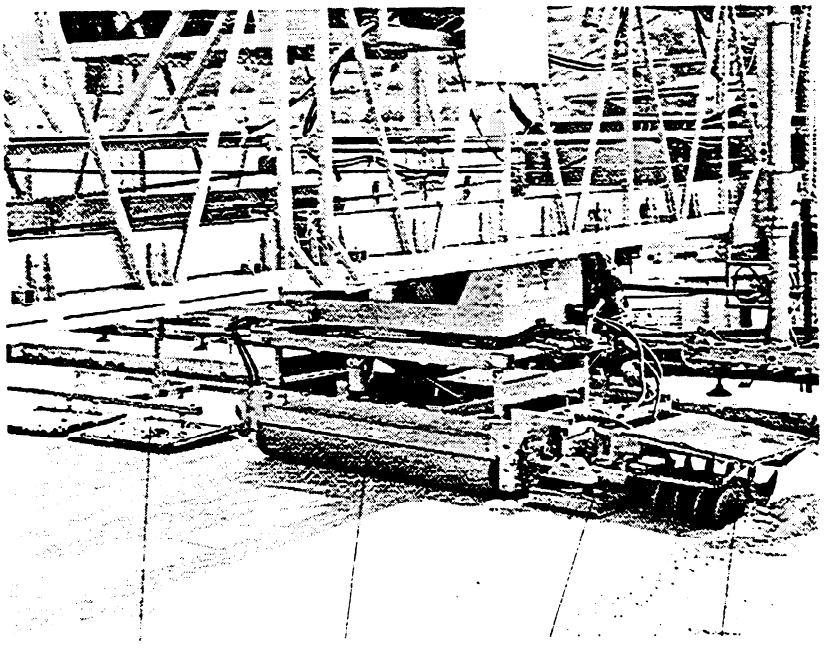
LATEX OVERLAYS

Bid-Well spreads, vibrates and finishes in one operation

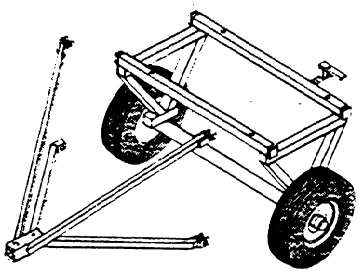
The addition of a hydraulically driven. rubber mounted. fully adjustable pan-type vibrator to a standard Bid-Well roller finisher makes it ideal for finishing latex overlay. In fact. the Bid-Well method of vibrating the surface. after the augers have trimmed the concrete to grade. has achieved the best results of any method on the market.

The dual augers move concrete forward on every pass. Mounted in front. they remove excess concrete so the overlay vibrator can achieve ideal consolidation.

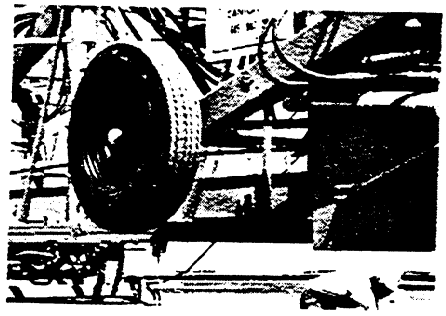
The vibrator has a variable speed to fit the consolidation needs of various slumps. It has a rapid screw-type height adjustment to achieve an exact vibrator surface pressure.



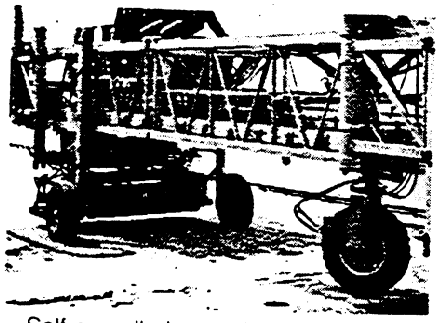
OPTIONS AVAILABLE



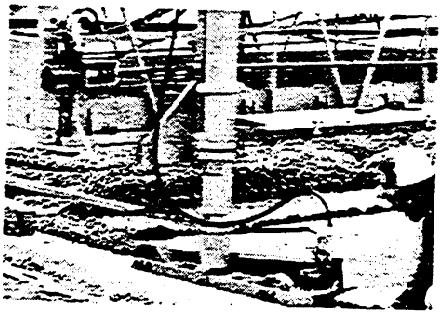
Towing tongue and transport dolly.



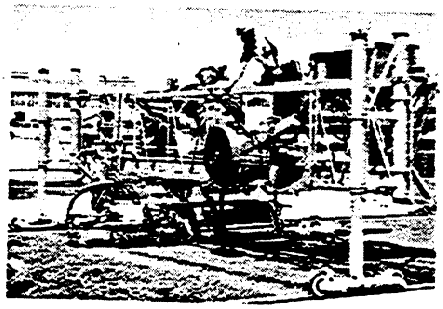
Power fold dolly.



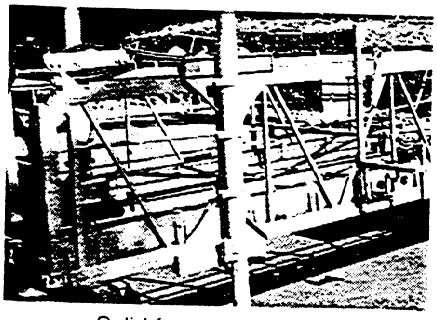
Self-propelled steerable nose wheel. Can be folded.



Powered leg widening.



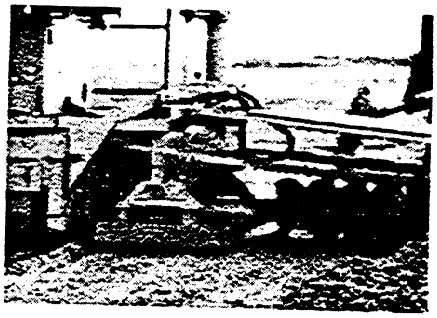
Swing-out legs for special applications.



Solid frame leg holder.

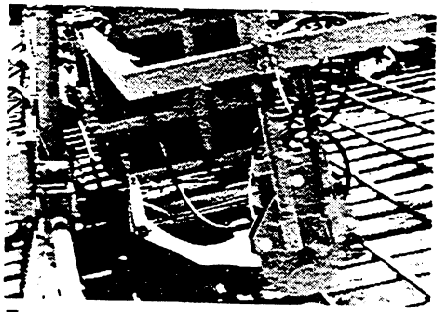
Automatic roller skewing device on carriage.

Powered crown adjuster.

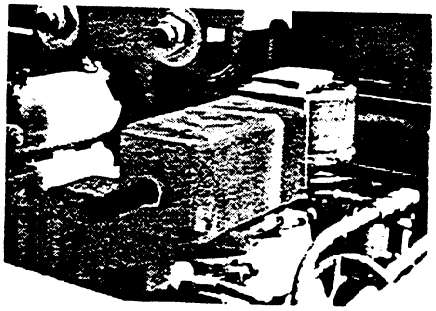


Pan vibrator.

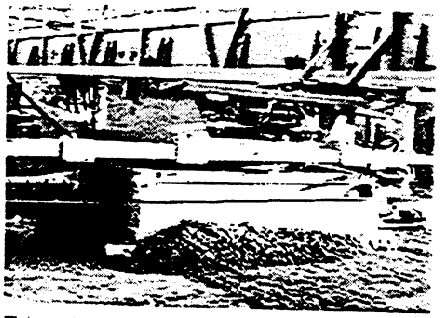
Retractable carriage. Shown raised and lowered.



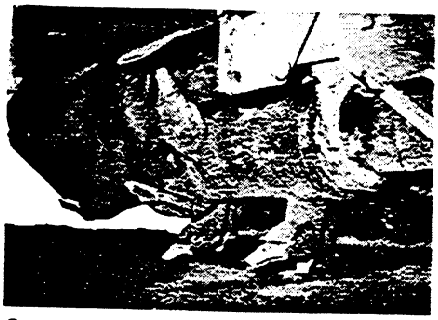
Transverse groove cutter--vibrating disk.



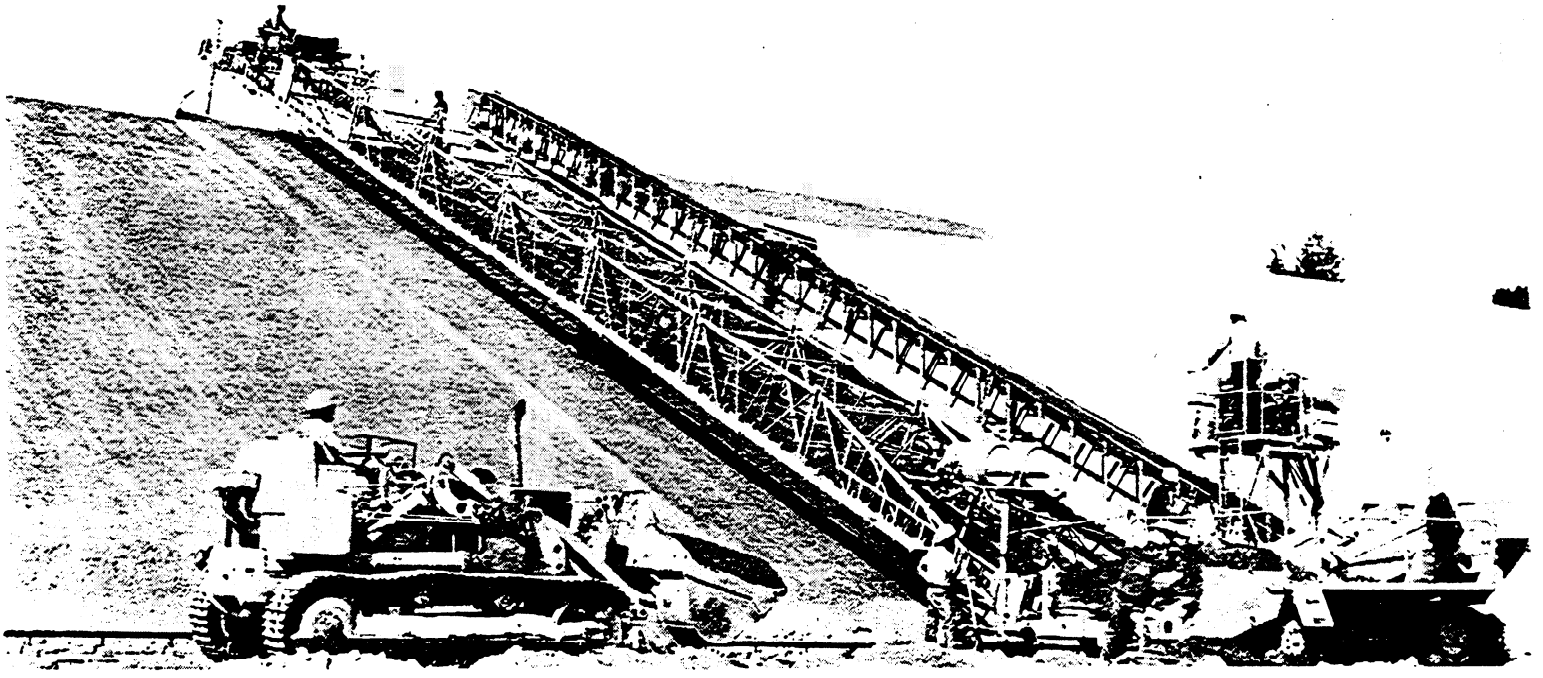
Side thrust rollers maintain carriage stability. Exclusive with Bid-Well. Standard on HD machine.

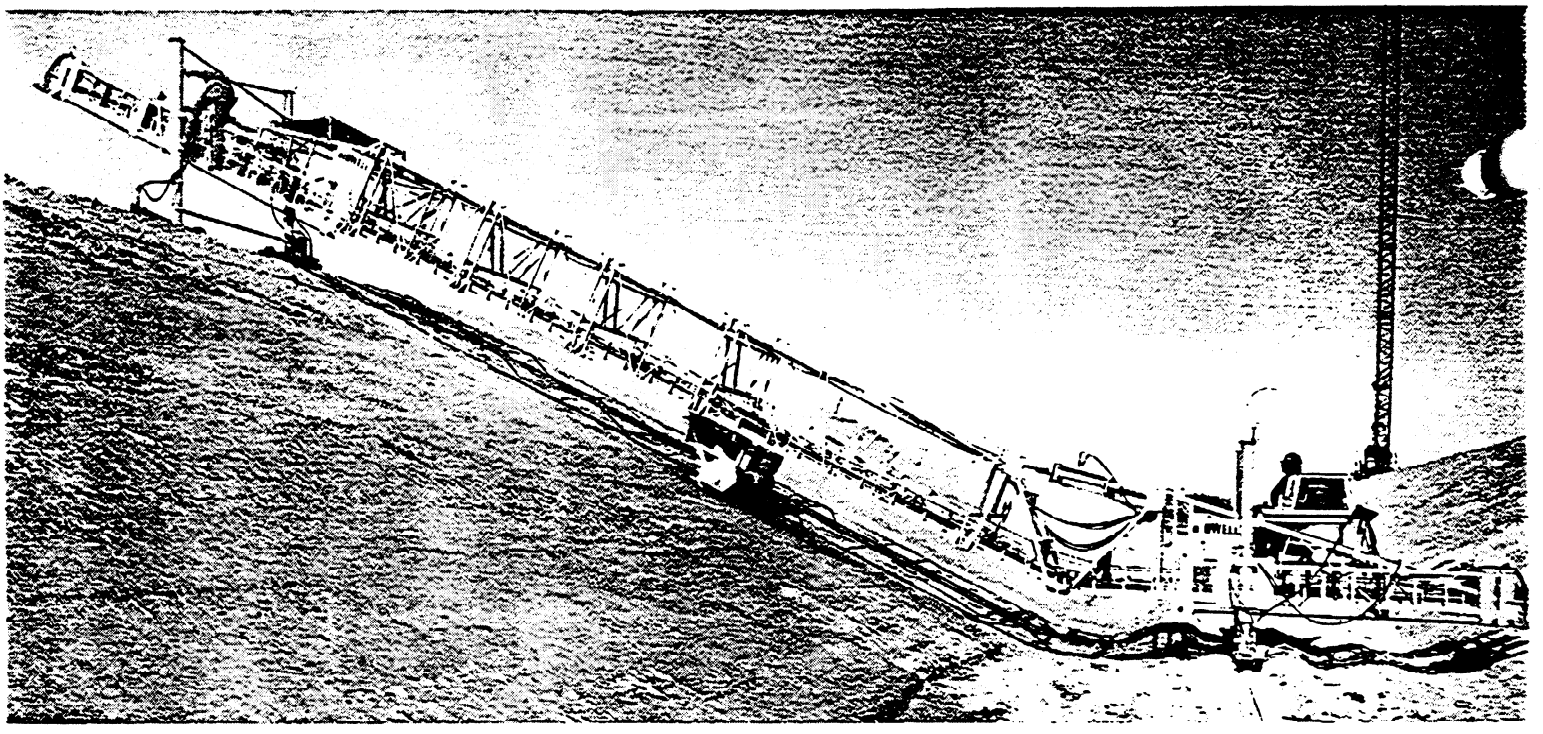


Trimming blade permits fine grading of the sub-base with finishing carriage.



Complete trimming carriage available with powered rotary head.





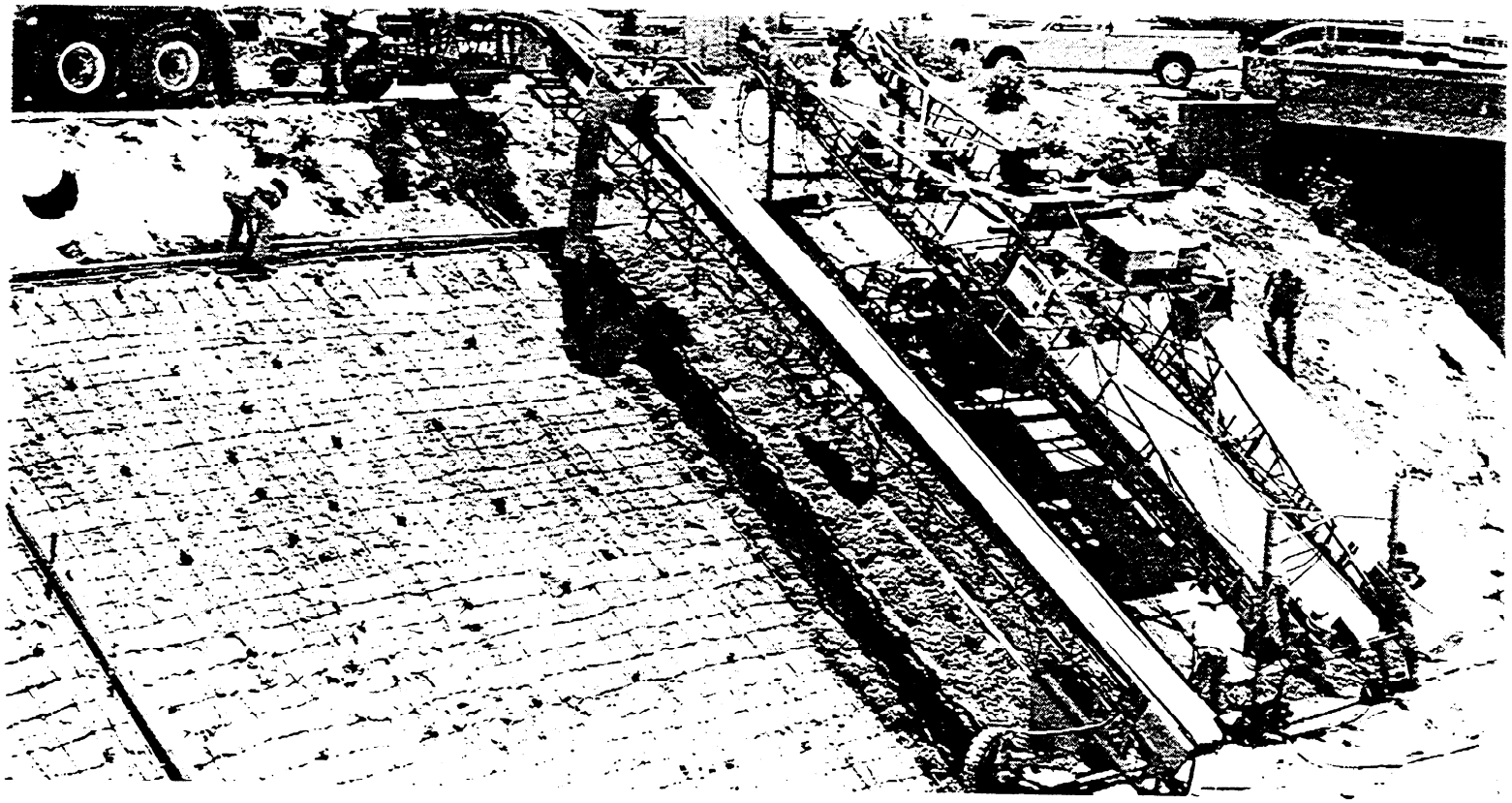
SLOPES as steep as 1½:1

Fine grades the sub-base and then finishes concrete on slopes!

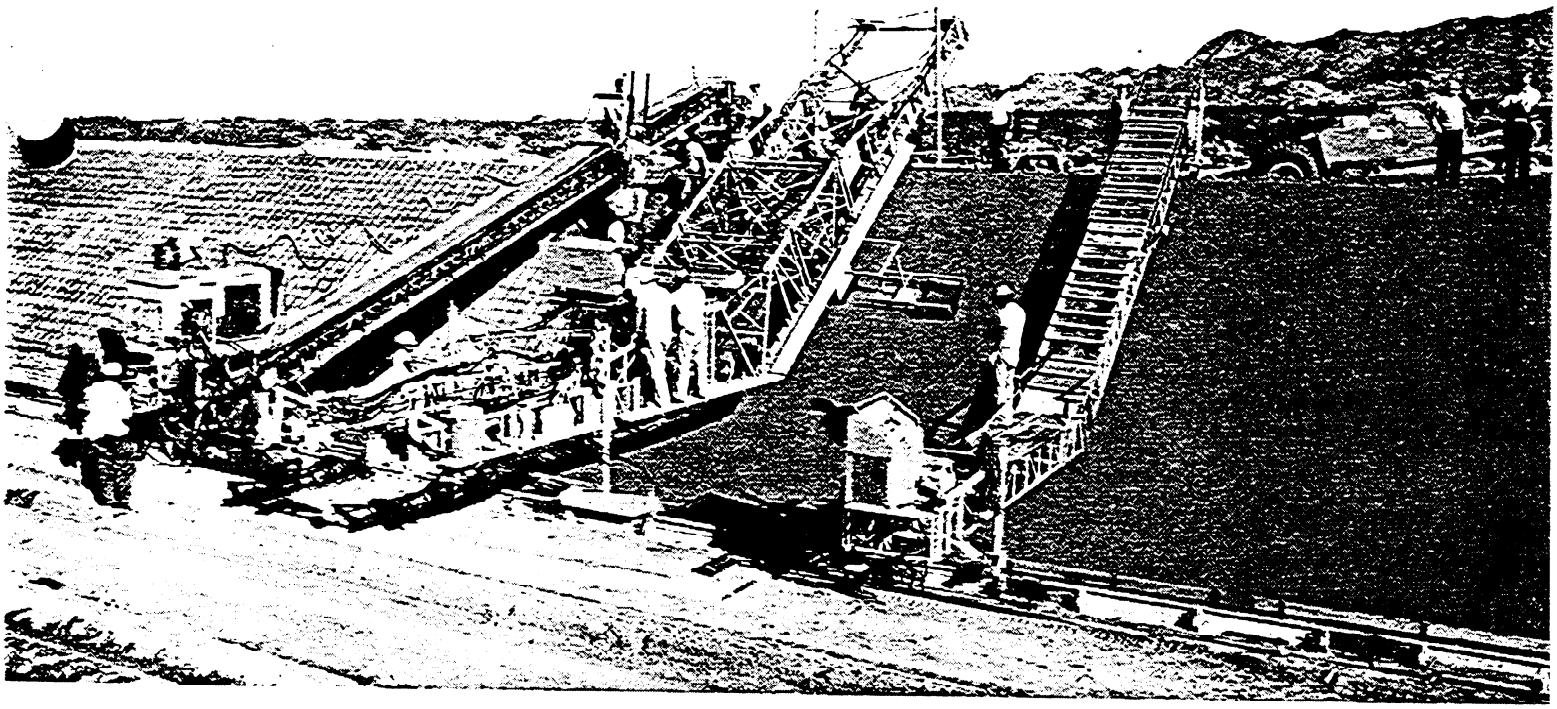
The slope paver has special adjustable slope leg brackets that keep legs vertical while the machine is on any slope The mounting for the power control console and the power unit on the carriage also can be tilted to remain even in operation. These mountings can be ordered on a new Bid-Well or can be added to any existing Bid-Well.

Slope trimming is done with a detachable blade on the roller carriage that trims only while going down the slope. Trimming the sub-base gives a more accurate concrete yield.

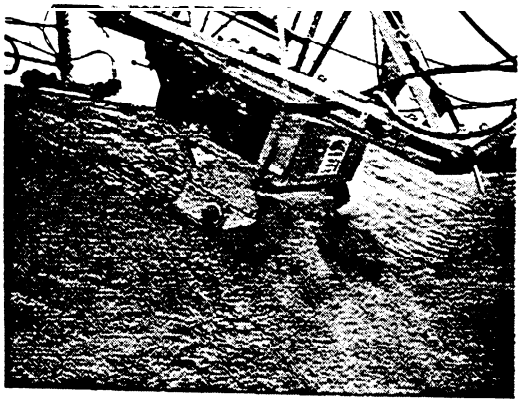
Then with the blade removed the roller finishes concrete going up the slope.



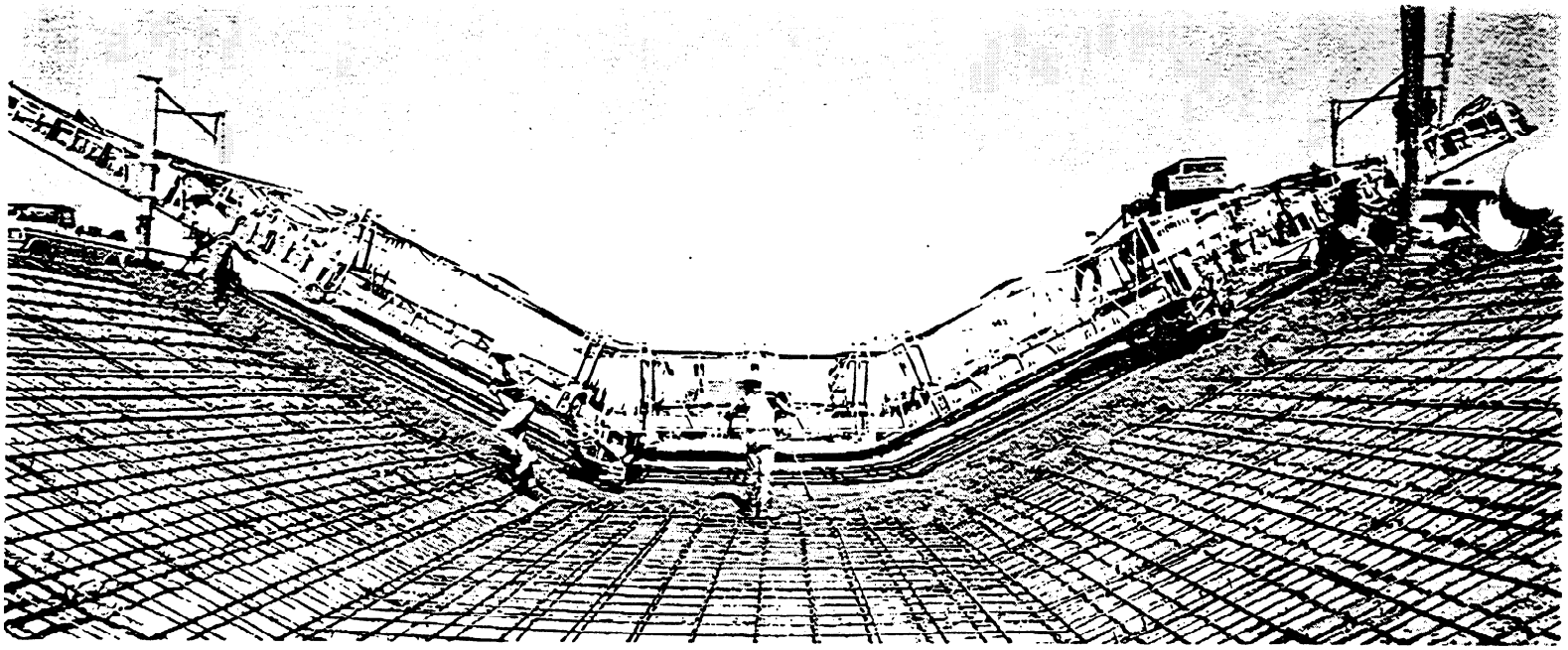
BR202 canal paver.



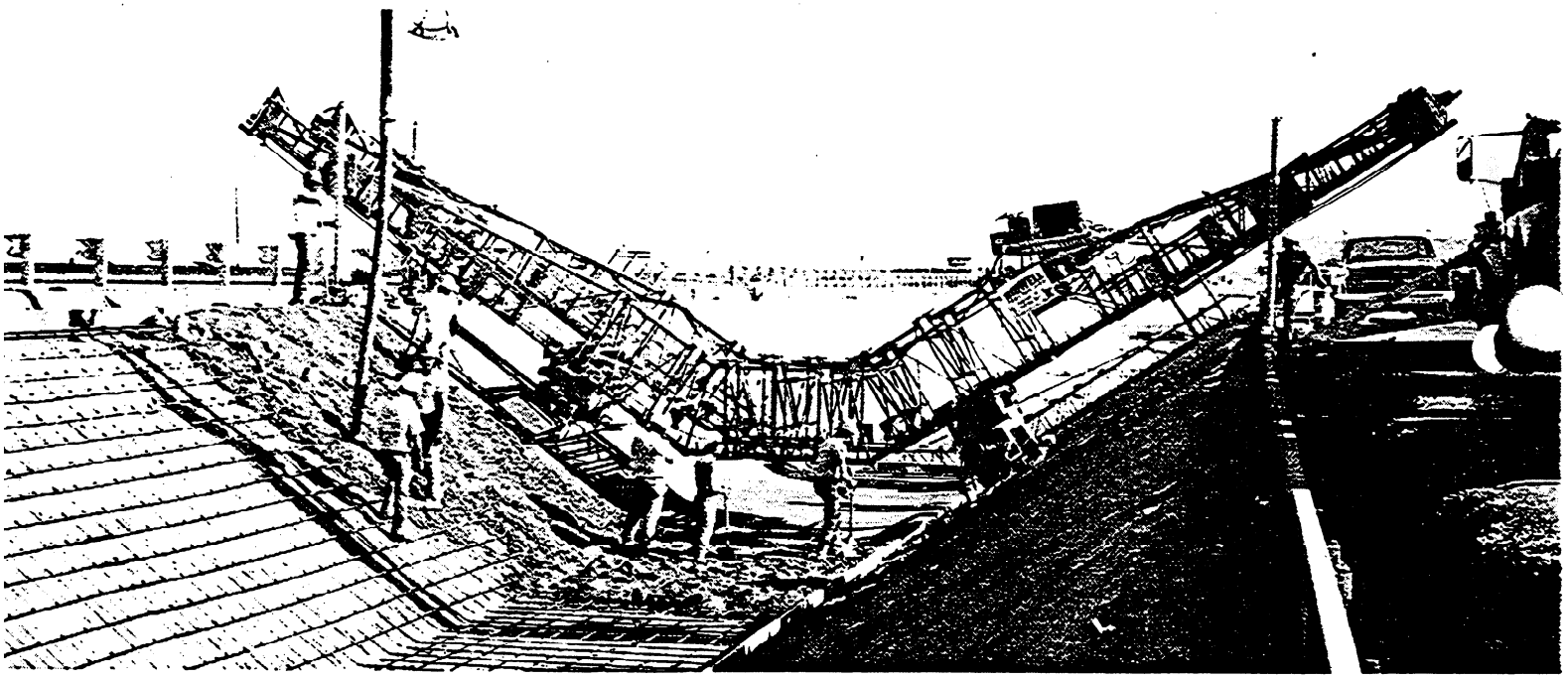
BR202 canal paver and powered workbridge.



(Left) Complete trimming carriage with powered rotary head.



BR202HD canal paver with one finishing roller per carriage



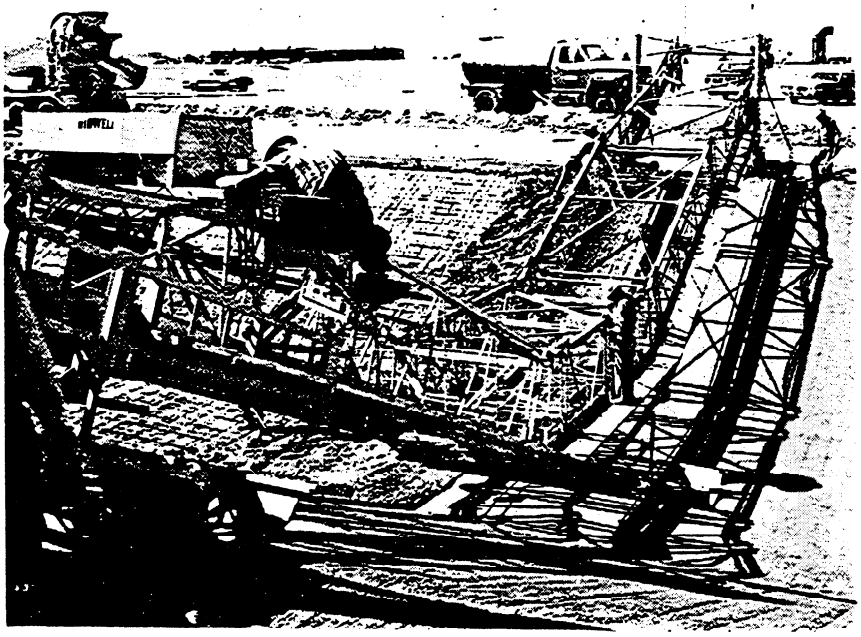
BR202HD canal paver with one finishing roller per carriage.

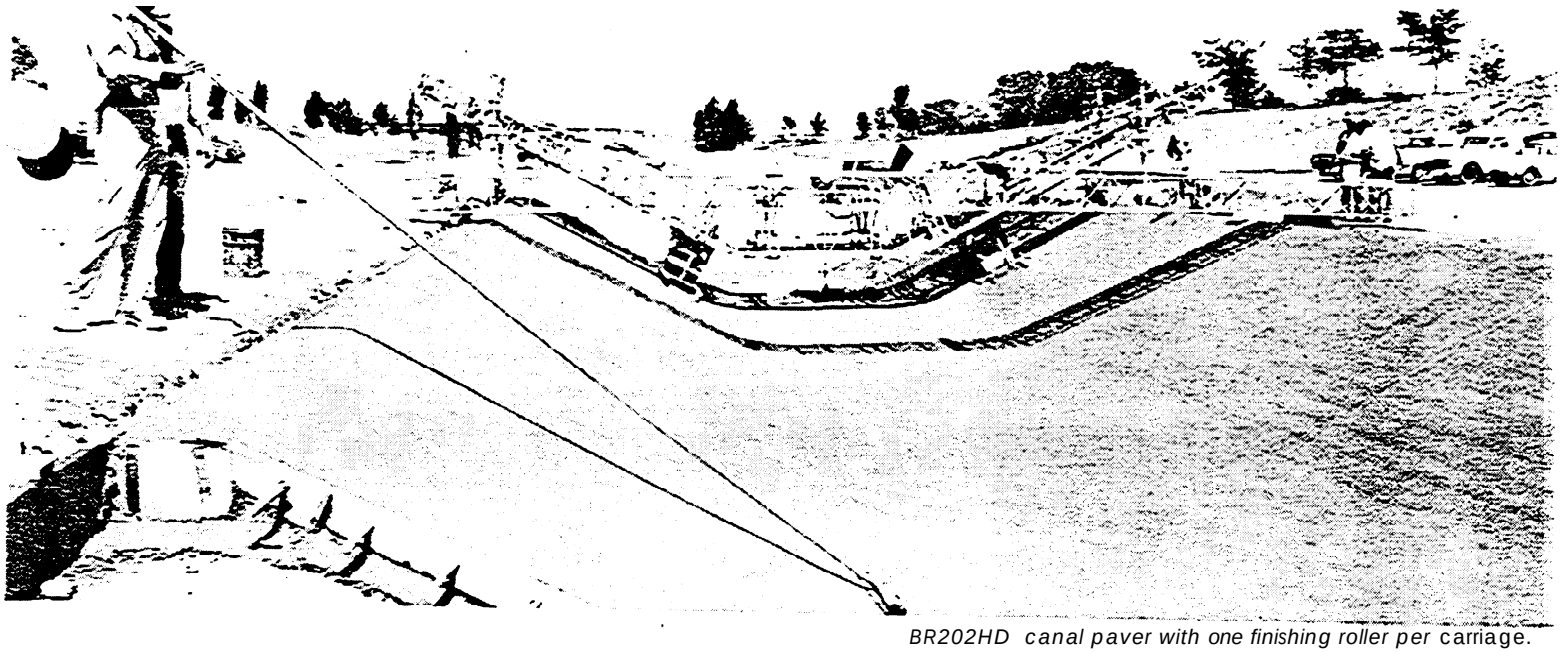
BR Series

FULL WIDTH
CANAL PAVERS

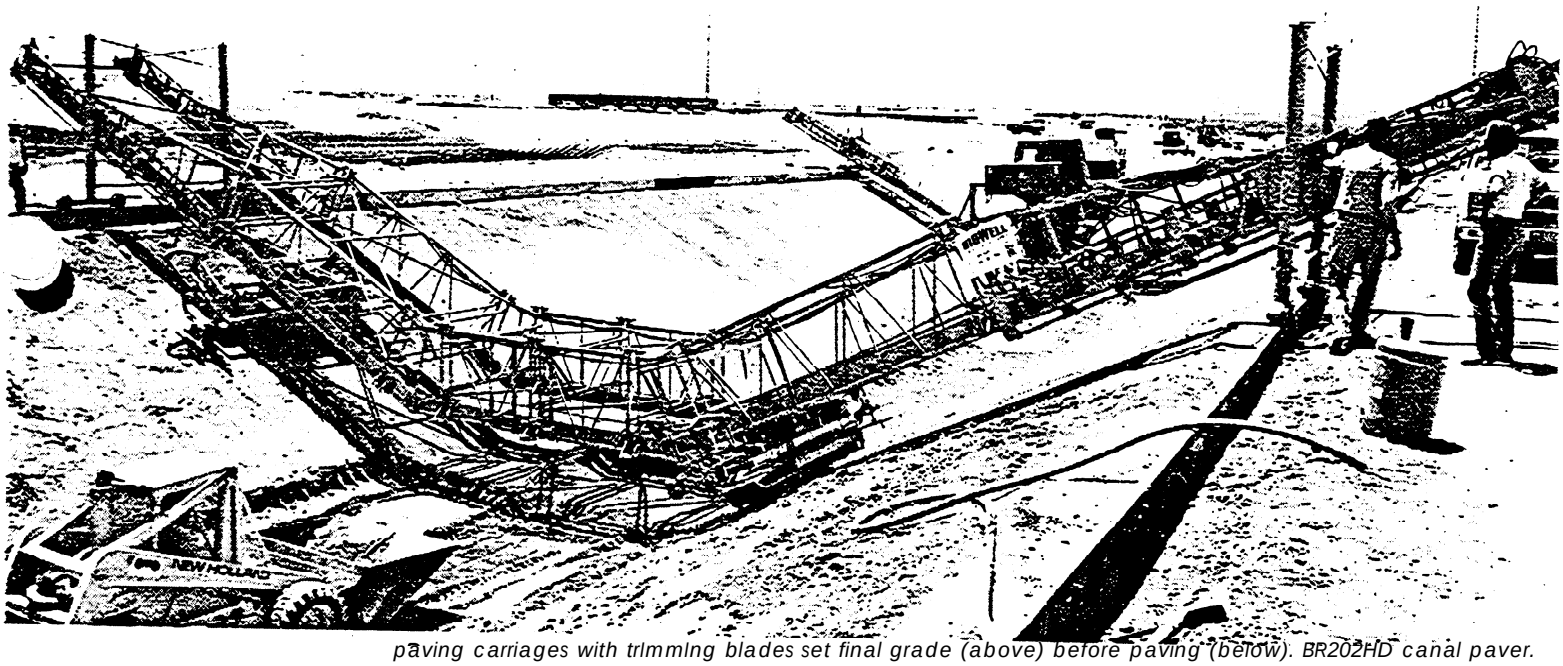
Bid-Well roller finishers can be adapted to pave the full width with single or double carriages. They often finish the invert and shoulders with the same pass. With the addition of blades. the same machine can trim the sub-grade as well.

Double carnages whose paths overlap slightly at the center permit paving both slopes and the invert at one time

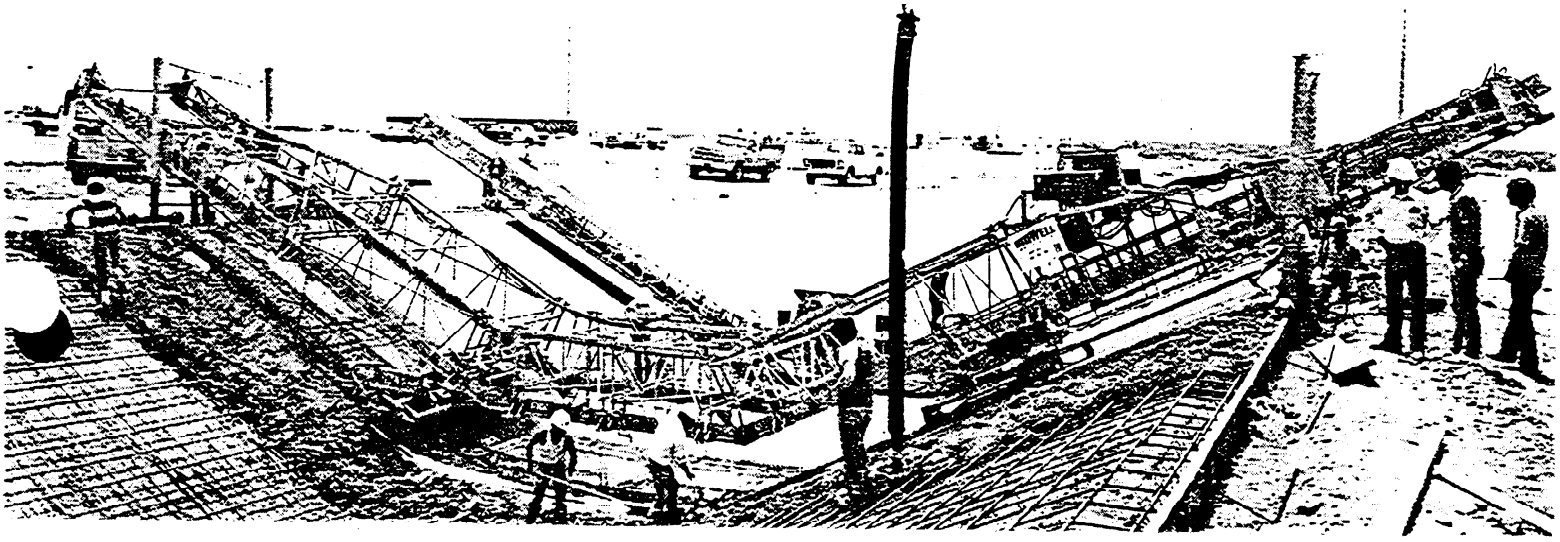


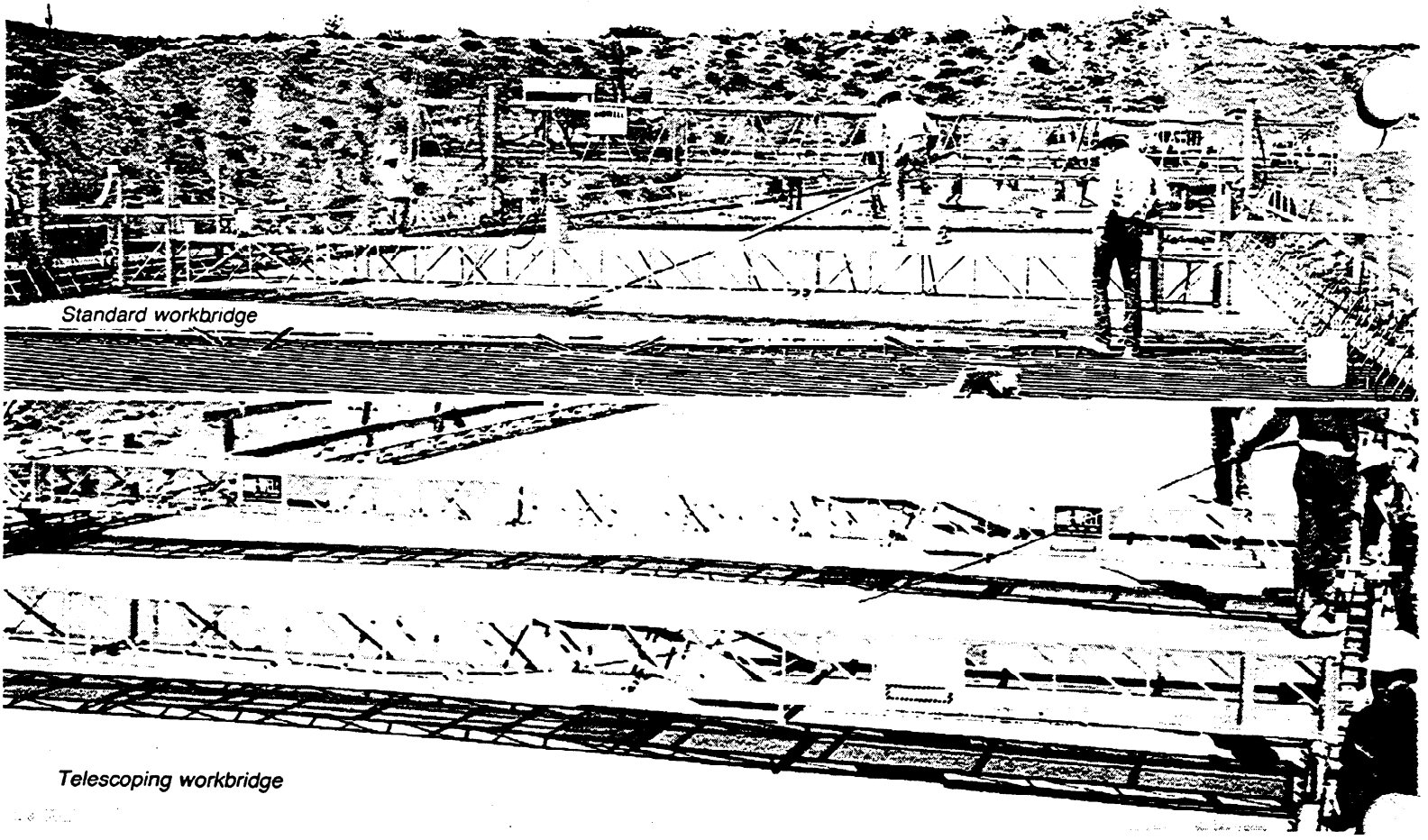


BR202HD canal paver with one finishing roller per carriage.



paving carriages with trlmmlng blades set final grade (above) before paving (below). BR202HD canal paver.





Standard workbridge

Telescoping workbridge

BID-WELL WORKBRIDGES

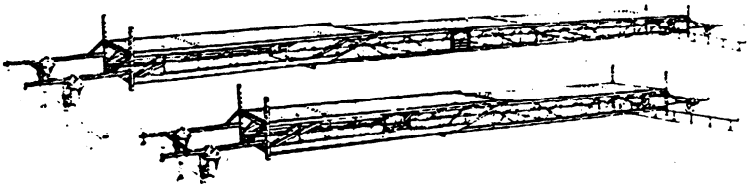
COMMON FEATURES:

STANDARD 'OR TELESCOPING

- Rugged lightweight tubular steel trusses, 34" (0.86m) wide. 18" (0.46m) or 24" (0.61 m) deep. 16-gauge expanded metal non-slip decking.
- Weight: approximately 190 Lbs. (86.2 KG) per ten feet of length.
- Quick assembling and dismantling. No bolting required for any length. Breaks down into sections to haul easily.
- Standard lengths available up to 105' (32.0m) on 18" (0.46m) deep boom or 140' (42.7m) on 24" (0.61 m) deep boom.
- Four 6" (0.15m) flat flange or concave wheels standard. Other wheels available.

STANDARD NON-TELESCOPING ENDS

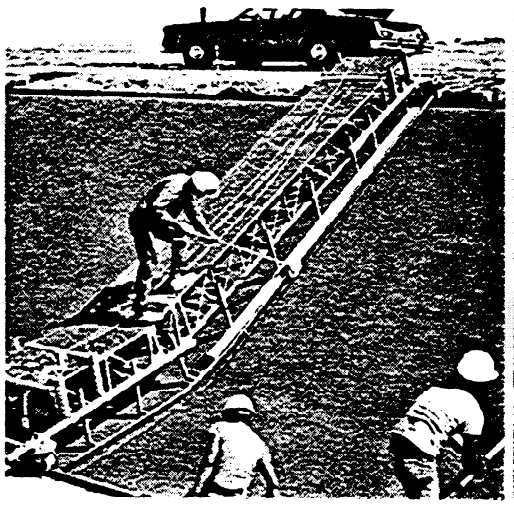
Each end section has a 4' (1.22m) width adjustment for a total of up to 8' (2.44m) of wheel width adjustment.

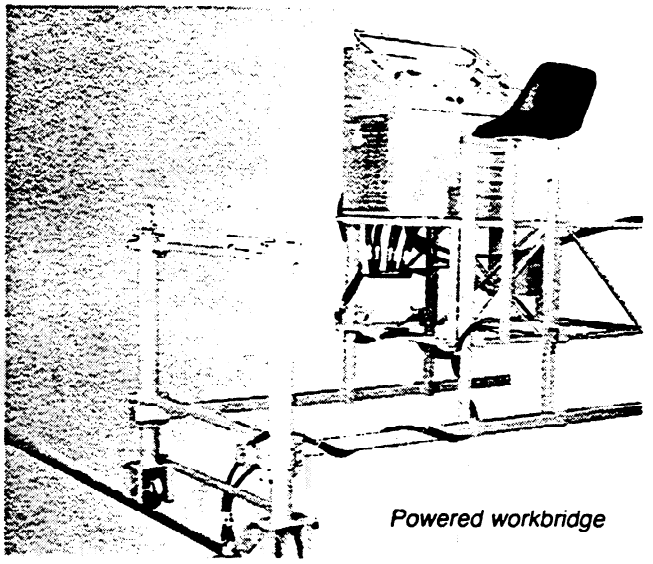


TELESCOPING END SECTIONS

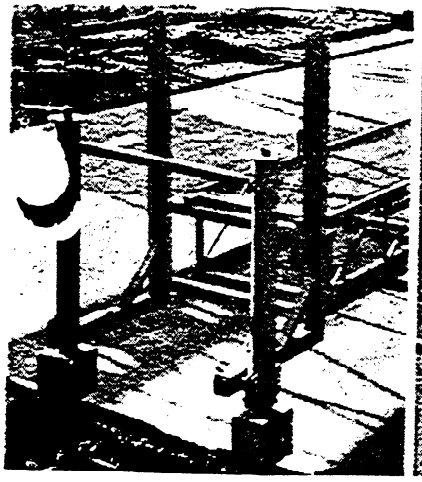
Each telescoping end section telescopes 10' (3.1 m). (Example: A 15' (4.6m) workbridge telescoping end section can expand to 25' (7.6m). A workbridge with two telescoping ends can expand 20'(6.2m).

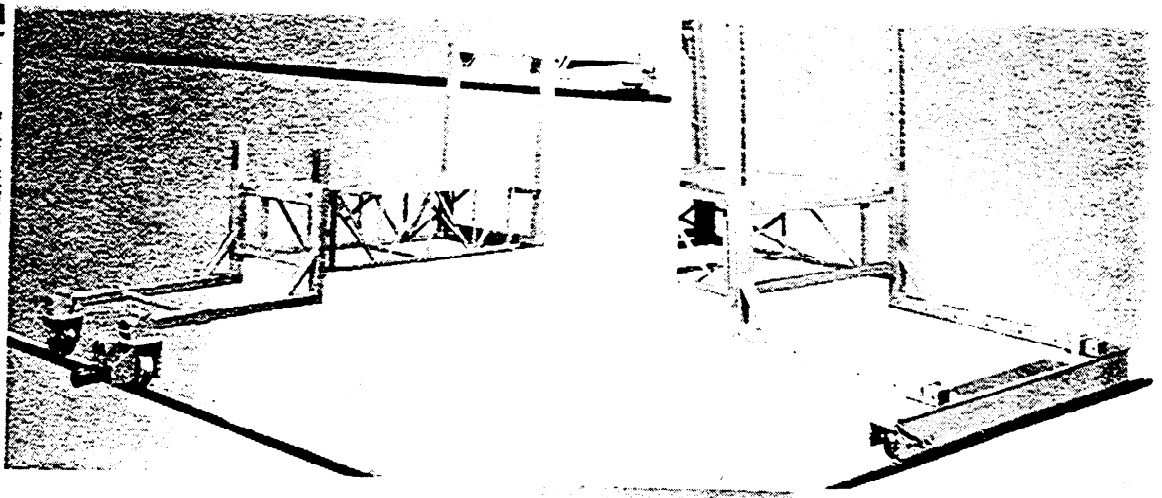
(Right) Workbridge with guide to cut grooves in fresh concrete.

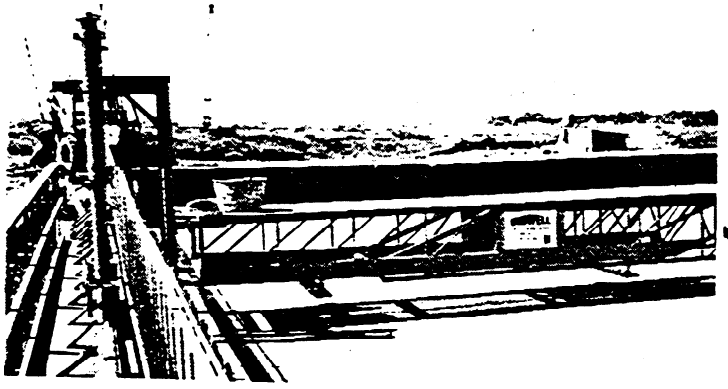


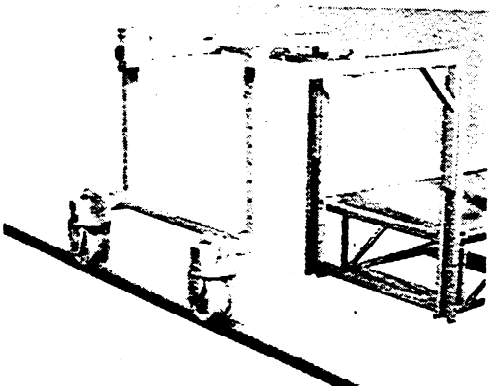


Powered workbridge

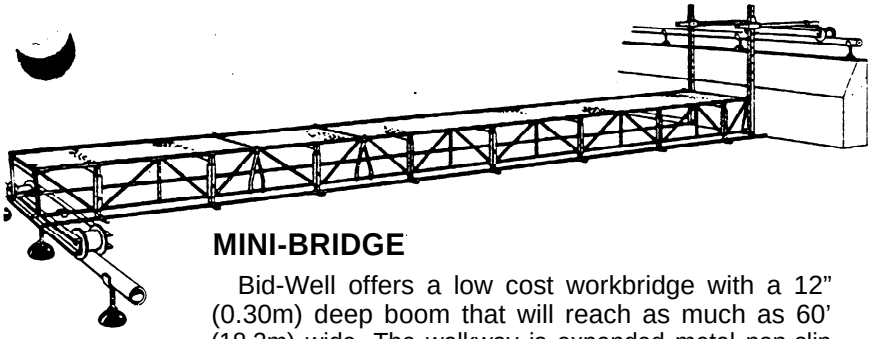






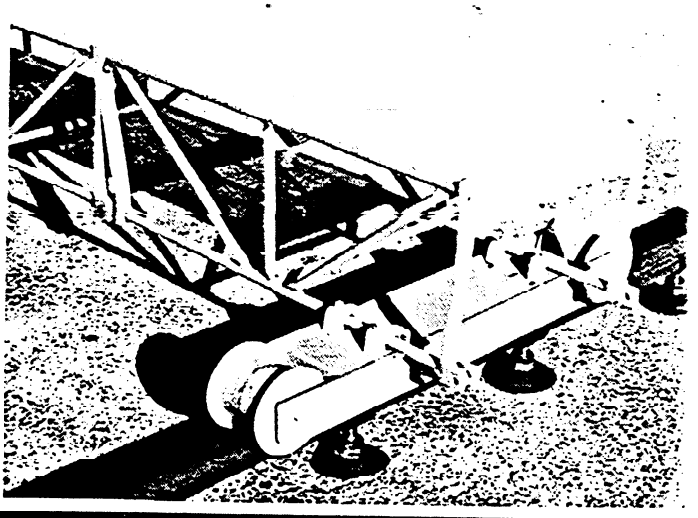


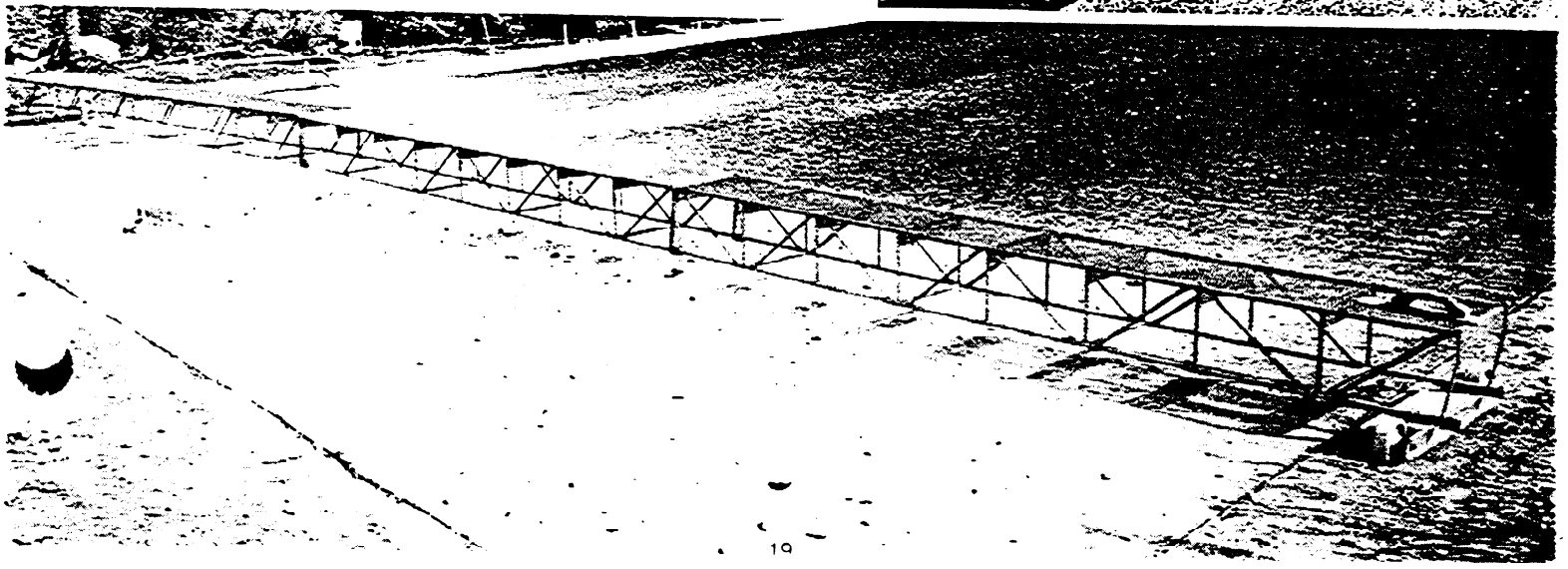
Bid-Well workbridge leg mounts options are available to fit any application.

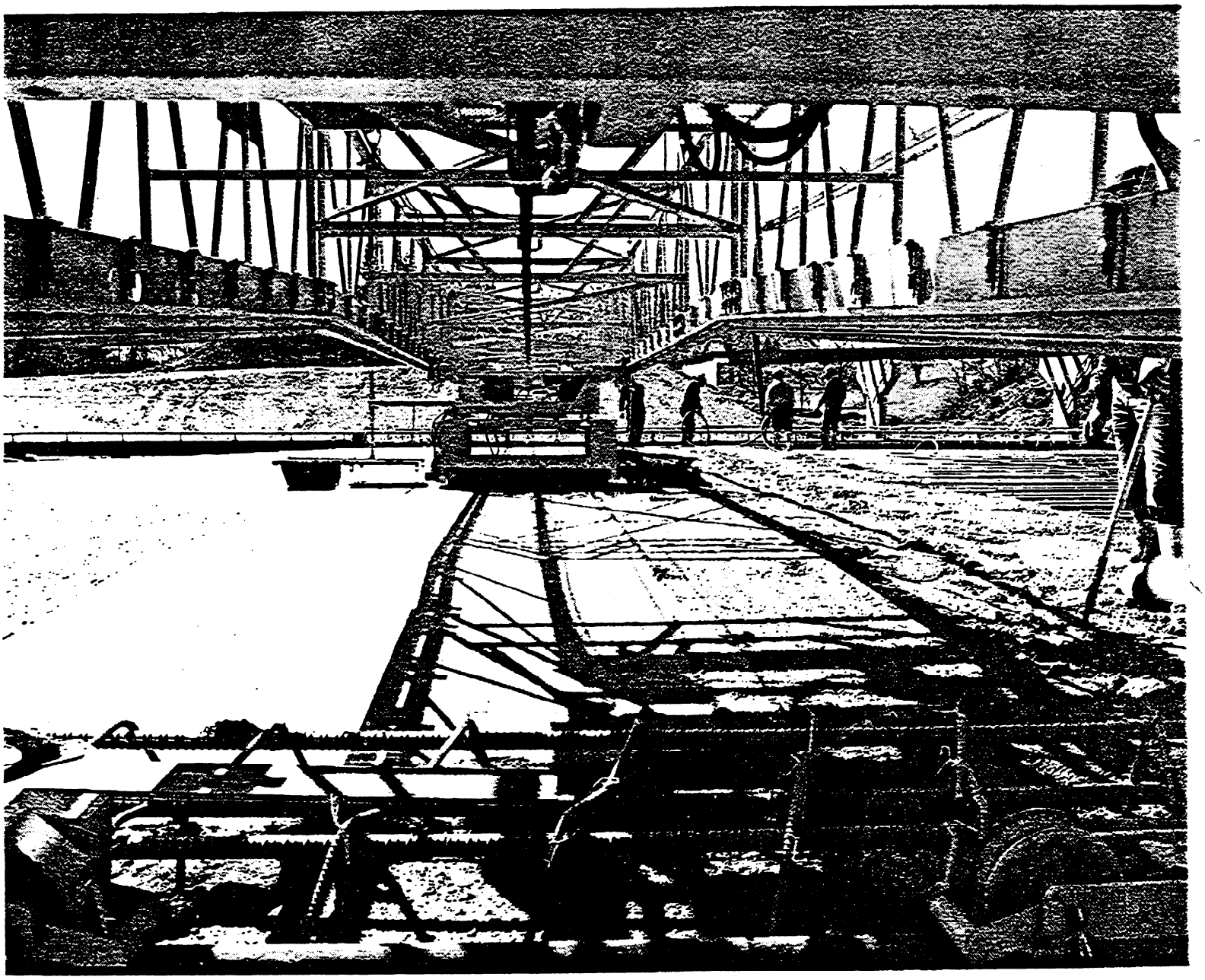


MINI-BRIDGE

Bid-Well offers a low cost workbridge with a 12" (0.30m) deep boom that will reach as much as 60' (18.3m) wide. The walkway is expanded metal non-slip decking 18" (0.46m) wide. Sections are available in 3' (0.9m), 6' (1.8m) and 12' (3.7m) lengths. Tower assembly allows workbridge to ride wall-mounted rail or median barrier up to 41" (1.04m).







Look to the Leader

cmi BID-WELL

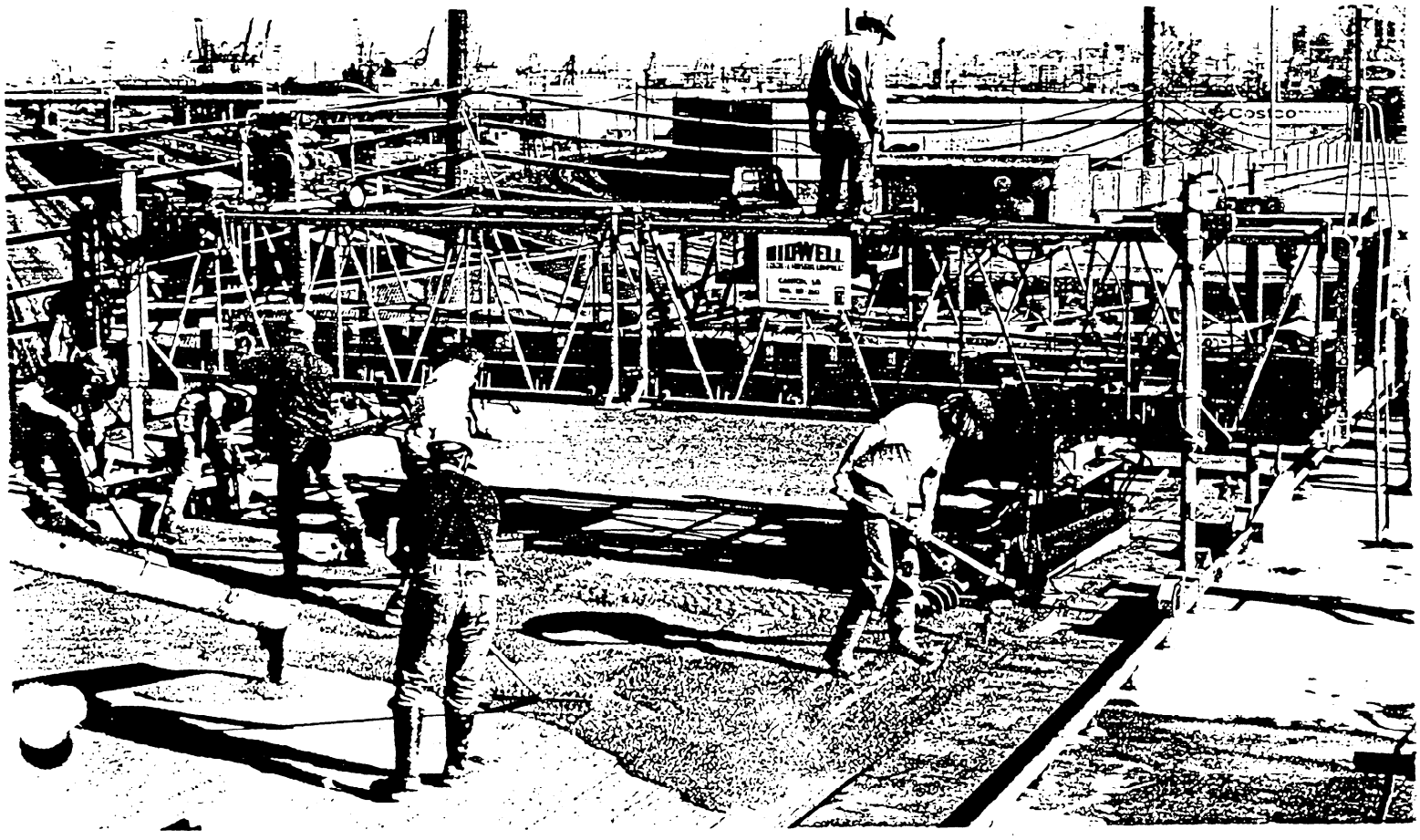
A DIVISION OF CMI CORPORATION
Box 97 CANTON, SD 57013
Telephone (605) 987-2603 Telex: (CMI International) 747167

Bulletin RF-6 1O88JN 5M

BIDWELL®

CMI CORPORATION OKLA CITY USA

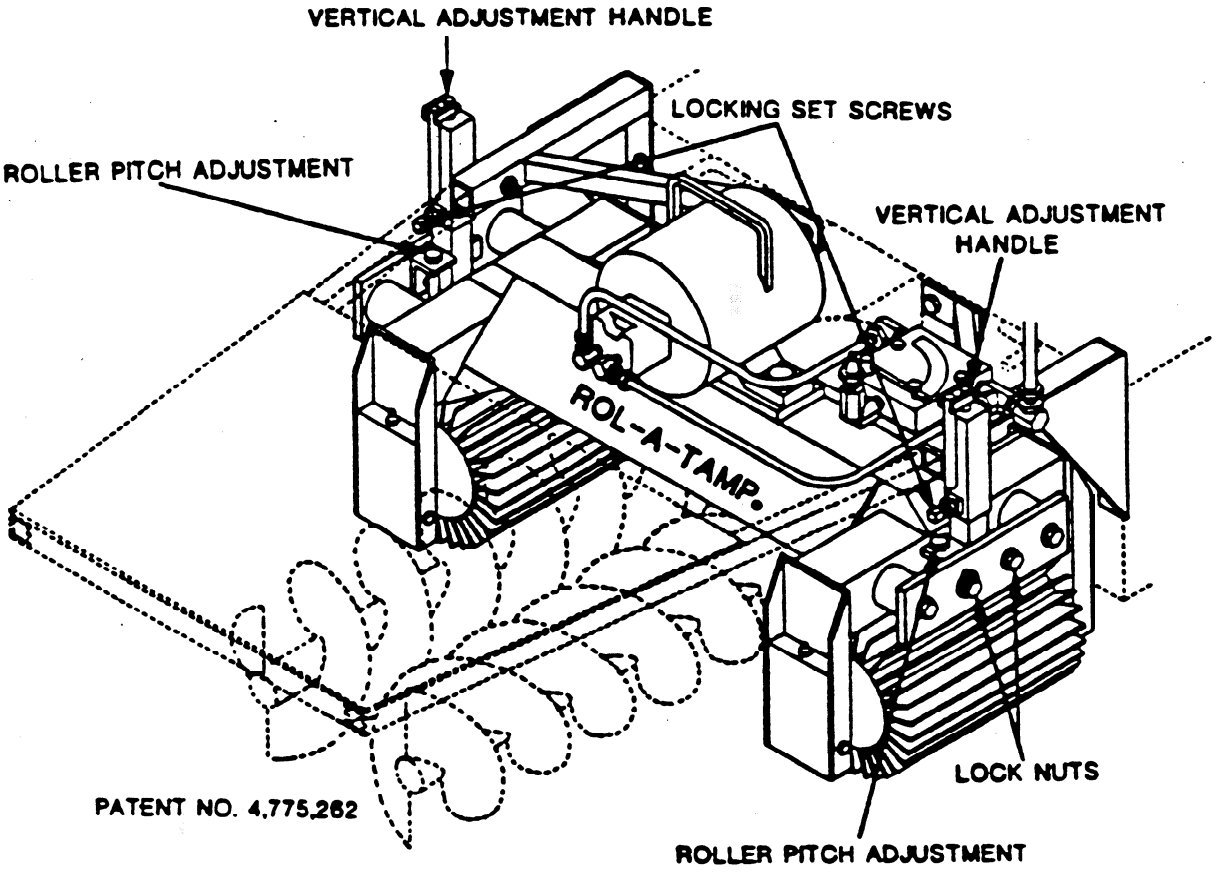
PAVING LATEX MODIFIED CONCRETE



P.O. BOX 97 CANTON, SOUTH DAKOTA 57013 AREA CODE 605 PHONE 887-2603 TELEX 295001 FAX 605-987-2605

VIBRATING ROL-A-TAMP

The Bid-Well Rol-A-Tamp Paving Attachment provides a means of achieving a more uniform concrete surface with desired density. This helps difficult to finish concrete due to unpredicatable delays, low slump specifications and wind exposure causing surface drying.



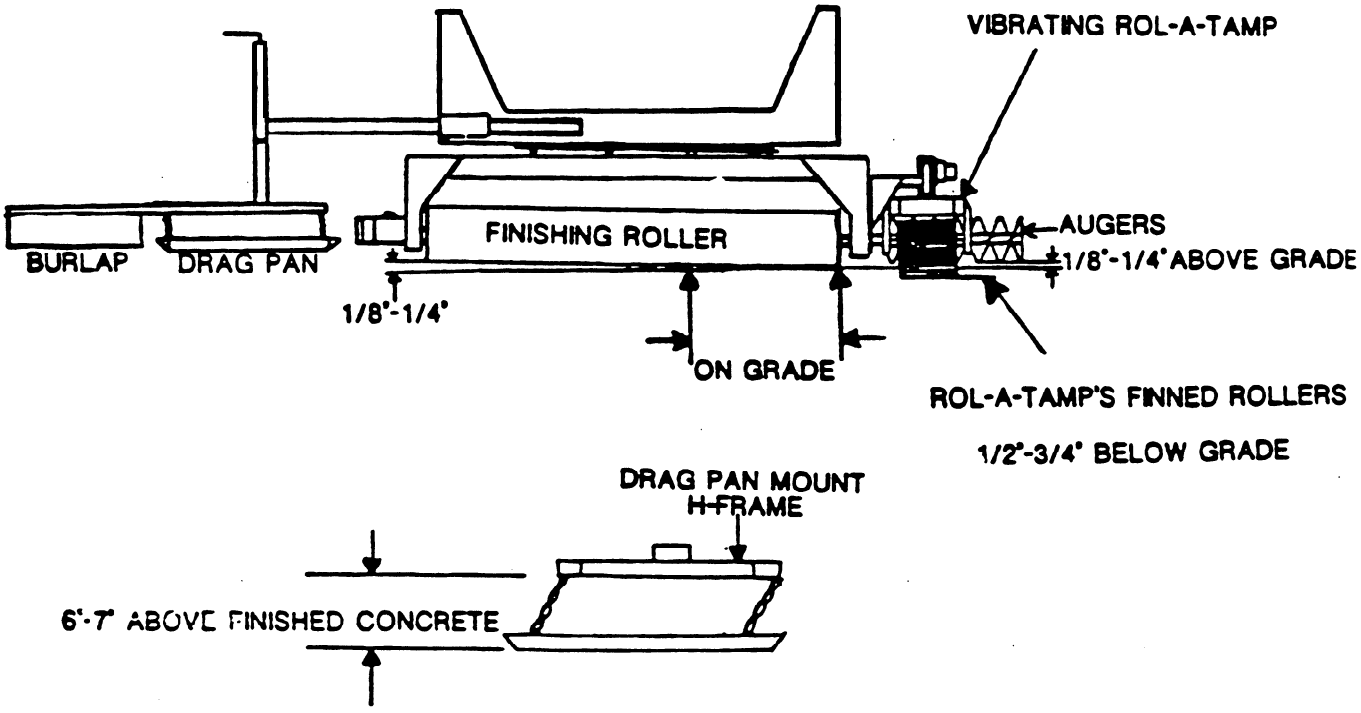
VIBRATING ROL-A-TAMP CONTINUED

With the Bid-Well Rol-A-Tamp paving attachment, the machine has the method of striking-off, vibrating and finishing (sealing) the surface of the Latex Modified Concrete.

The Roller Tamper, which mounts from the finishing carriage, utilizes two free-wheeling finned rollers, 11" long - 7 l/2" O.D. with fins 1" long 3/16" thick. The finned rolleri are positioned between the leveling augers and finishing rollers can be adjusted horizontally and vertically.

Vibration is provided to prevent concrete from adhering and building up on the fins but also helps to obtain a more uniform and consolidated surface.

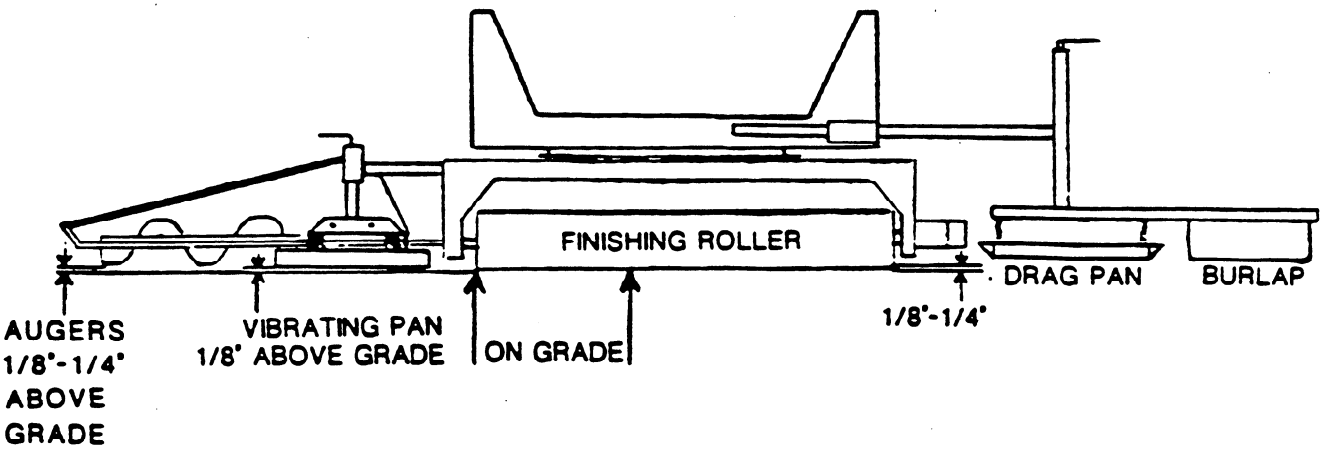
The Vibrating Rol-A-Tamp's finned rollers are set approximately l/2" - 3/4" below finished grade. The vibration of the Rol-A-Tamp should run between 4000-5006 vibrations per minute, this can be - checked with a vibra tak that is provided with the Rol-A-Tamp attachment. Then the finishing rollers set to grade seal the surface of the Latex Modified Concrete. As soon as the finishing rollers pass over the starting bulk head, the rear of the rollers should be raised a minimum of l/8" to l/4". This will allow maximum roller contact with the material. It may be of some benefit to have minimal contact of finishing roller with the material with the Latex material, as it will prevent sticking and some tearing if the material is drying rapidly on the surface. The raising of the rollers is accomplished by turning the rear leg cranks 1 full turn counter clockwise for each l/4"; l/2 turn for l/8". The finishing pan and burlap drag (soaked in a water or latex water mixture) are used to insure a good surface seal.

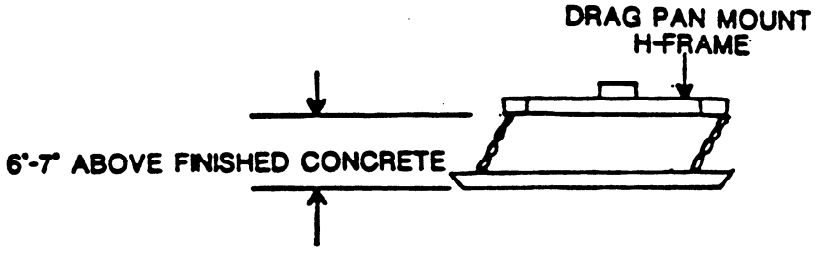


VIBRATING PAN

The paving machine should have the method of metering, vibrating and finishing the surface of the Latex Modified Concrete: With all functions properly adjusted, the augers will meter the concrete approximately l/8"-l/4" above the finished grade, the vibrating pan set approximately l/8" above finished grade and the finishing rollers on grade, it will result in leaving the right amount of-material for the finishing rollers to seal any open areas in the surface, without the vibrating pan or rollers having to plow or move excess concrete. This will also improve consolidation by the pan vibrator, with normal operating speeds from O-7000 vibrations per minute with normal speeds of 4000-5000 VPM yielding the best results.

The finishing pan and burlap drag (normally soaked in water or wetted with a mixture of latex and water) behind the finishing rollers, will help insure s good surface seal.





PAVING LATEX MODIFIED CONCRETE

1) It is very-important that the machine has a straight and solid set of rails to run on. It is our experience that round pipe is superior to square tubing or beam rails. We recommend 2" schedule 80 black iron pipe, with the use of low profile overlay adjustable chairs spaced at 24" on center. l The pipe is easier to align, to set into the chairs and confirms to radius turns better than any other type of rail. The slab or finish grade can be no better than the grade of the rails as they give the longitudinal profile.

2) If the overlayment is to be made in several passes a nail strip is commonly used to help maintain a straightline adge and to keep the outer edge' from slumping. It is also a means of not wasting excess material. **REMEMBER: DO NOT** place material over 3 to 5 ft. in front of the machine.

3) The vibration or frequency of the attachments is easily controlled on the front of the carriage. This permits changing the speed to match the requirements of the job, slump, depth of our mix designs. With the vibrator properly adjusted or set to speed, the attachments will tend to make the material more uniform with desired density, removing air pockets and voids.

4) For maximum production and best machine performance every effort should be made to control the quality and consistency of the concrete to be delivered or placed. Particularily variations in slump will result in less than optimum performance. Deep holes or partial depth pockets should be filled to nominal scarafied grade and vibrated with hand vibrators.

5) The finishing process should normally be complete, as soon as possible by the machine in a period not normally to exceed ten minutes from the time of placement of the concrete to finish, as the set-up time or the time that the film or latex skin forms on the surface is generally 10-15 minutes in time, with the normal slump of 4 l/2-7 inches. This will give adequate time for hand finishing along curb edges and the texturing desired or required, before the surface film art skin forms.

6) Due to the nature of latex modified concrete temperature and wind become very much a factor. With a temperature of 85 degrees Fahrenheit, the pouring of latex modified concrete is not recommended. A high or constant wind will aid and speed the set-up time, causing problems with the finishing process, tearing open the surface caused by latex buildup on the rollers; therefore, is not recommended.

PAVING LATEX MODIFIED CONCRETE

continued

When placing Latex Modified Concrete onto the deck surface, make sure that the deck is prewetted; not having a chance to dry out. Using some of the material placed, spread it out onto the deck and broom it into the deck surface ahead of the machine, removing the majority of the large aggregate, This should leave the deck covered with a latex slurry an all aggregate removed. Brush the slurry up onto curbs or adjoining slabs a minimum of 3 inches to insure a good bond. DO NOT place material more than 3 to 5 feet in front of the machine as it can dry out.

CARRIAGE TRAVEL SPEED

To control carriage travel speed is a must and an advantage, especially when doing Latex Modified Concrete Overlays. Much study has been done as to the effect of the speed of the finishing member passing over the surface of the latex. Not only does the slowing down *of* the carriage travel (Bid-Well recommends somewhere in the 60-65 feet per minute range) improve the overall overlay problems, it also -will allow the finishing rollers to have longer contact with the initial surface and do a better job of sealing. It may be a benefit to also slow the speed of the finishing rollers also. The pour rate is not changed as the advancement of the machine may increase to compensate for slower carriage travel.

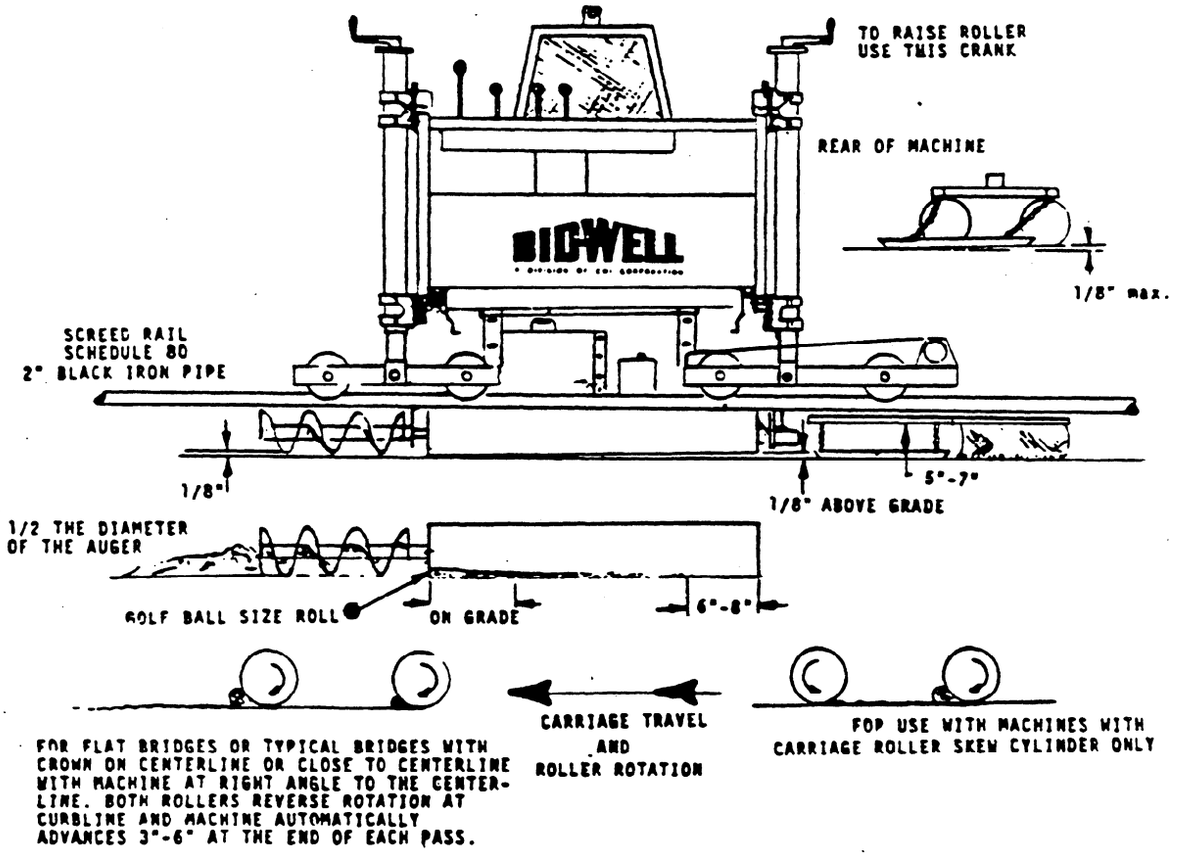
FINISHING ROLLER DIRECTIONAL ROTATION

At times It may become an advantage to be able to change the direction of the finishing rollers.

*Normal rotation is to have both rollers turning in the same direction when paving on straight or flat surfaces with the rollers reversing direction at the end of each carriage pass.

By changing direction of one or both rollers it may be an advantage to have the first roller or leading roller, roll over and consolidate the aggregate and the second roller finish the surface with out the rollers ever reversing direction.

ROLLER ROTATION DIRECTION
CARRIAGE TRAVEL DIRECTION



LATEX MODIFIED CONCRETE OVERLAY

TROUBLE SHOOTING PAVING PROBLEMS

SYMPTOM	Excess concrete on vibrating pan (plowing concrete). Excess concrete roll on finishing rollers.
CAUSE	Augers set to high.
REMEDY	Adjust augers lower, this will leave just enough concrete to allow the vibrating pan to vibrate the material and the finishing roller to have a mall size roll of concrete on it, to seal the surface.
SYMPTOM	No concrete on vibrating pan. No concrete on finishing roller.
CAUSE	Auger set too low.
REMEDY	Raise augers-to above remedy procedure.
SYMPTOM	No concrete in contact with vibrator pan and excessive concrete on finishing rollers.
CAUSE	Auger set too high - vibrator pan set too high.
REMEDY	Lower augers and pan to remedy procedure stated above.
SYMPTOM	Excessive amount of concrete on vibrating pan (plowing the concrete). No concrete or roll on finishing rollers.
CAUSE	Augers and vibrating pan set too low.
REMEDY	Raise augers and vibrating pan to remedy procedure stated above.
SYMPTOM	Open or pitted surface from finishing rollers.
CAUSE	Finishing rollers carrying too much concrete (roll is too large on side of rollers). The carriage travel speed may be too fast, or the material may be placed on 'the deck too fat in front of the finishing machine.
REMEDY	Adjust augers and pan as stated above, reduce carriage travel speed with carriage speed control valve, and reduce the length or distance in front of the machine where the material is placed, also checking slump to make sure it is within specification - normally 4 1/2 Inches to 7 inches.

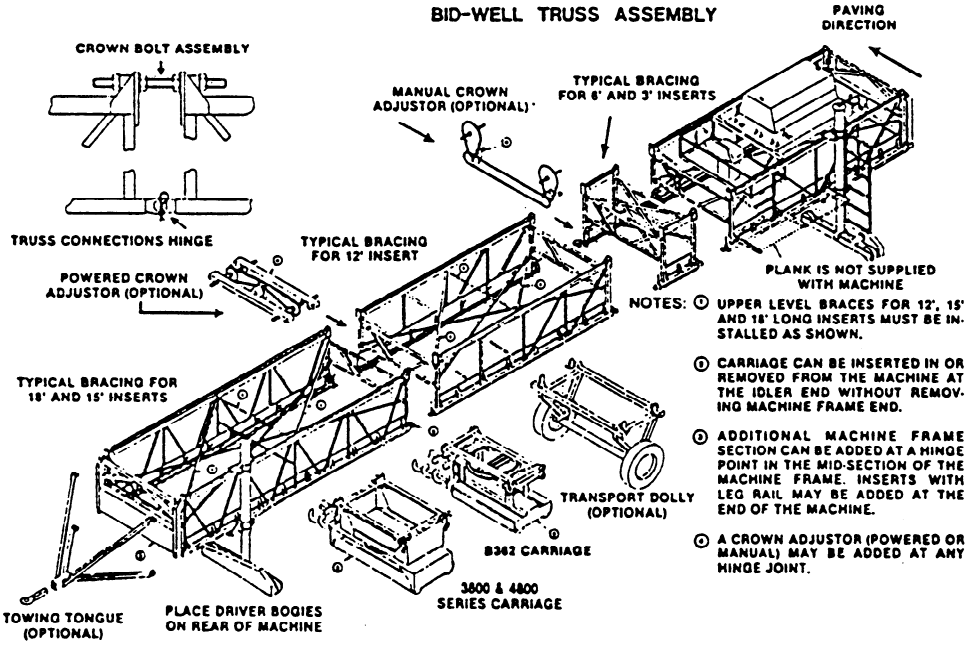
TROUBLE SHOOTING CONTINUES

SYMPTOM	Roll of grout coming off the rear of the finishing rollers or rollers leaving a ridge in the slab.
CAUSE	The rear or back of the machine is too low.
REMEDY	Raise the back or rear of the machine until the excess roll or ridge disappears (normally the back end of the finishing rollers will be 1/8 inch higher than the front or leading end of the finishing rollers).'
SYMPTOM	Raise or finishing pan is leaving an indention in the surface at the slab edge.
CAUSE	There may be too much additional weight on the finishing pan or the pan my be being pulled at a point too high by the pan hanger frame.
REMEDY	Remove the added weight (usually concrete on the pan) from the pan and readjust the height from the top of the pan to the bottom of the H or hanger frame to approximately 7 inches.
SYMPTOM	The total finished surface behind the finishing pan is not 100% seal cd.
CAUSE	?
REMEDY	The use of a burlap drag is suggested, keeping the burlap damp at all times.

BID-WELL®

CMI CORPORATION OKLA CITY USA

ROLLER PAVER SET-UP INSTRUCTIONS AND PAVING PROCEDURES



BID-WELL P.O. BOX 97 CANTON, SOUTH DAKOTA 57013 AREA CODE 605 PHONE 967-2603 TELEX 295001 FAX 605-987-2605

ASSEMBLING YOUR BID-WELL ROLLER PAVER

(To Be Used With Manual)

FOR ADDITIONAL HELP CALL BID-WELL (605)987-2603

A CAUTION:

1. **Put safety first - read operators manual.**
2. **Assemble machine with all cross braces and safety shields - consult owners manual for safe lifting.**
3. **Clear machine of all personnel before starting and operating.**
4. **Stop engines before cleaning machine.**
5. **Never take safety for granted.**

With all of the preparation, time and money spent in putting up the sub structure of a bridge or the dirt work involved in preparing the sub grade of a roadway. The most important factor of a good concrete pour is the set up of the paving machine.

The assembly and adjustments of the Bid-Well Roller Paver can normally be accomplished by two men with a good set of hand tools and some type of lifting device capable of lifting the machine safely.

When assembling the machine, check if there is a crown in the deck or roadway. It is ideal to have hinge point of the truss frame directly above the crown point. For machines over sixty feet in length, machine truss frame stress can be minimized by placing the shortest inserts near the end sections of the machine when possible.

After the assembly has been completed and the machine is ready to be placed on the deck, a Pre-placement check-out should be done both mechanical and hydraulic.

The mechanical checkout should include an inventory of all attachments for the machine. Augers, right and left hand, auger guard and drag pan assembly. The machine should be checked to make sure it is operational, that is, by running the carriage travel, paving rollers and augers and also machine travel or running the travel bogies,

The hydraulic checkout should be done at the same time. Checking of engine oil and hydraulic pump seals, and hydraulic oil reservoir levels.

Also check hydraulic quick disconnects to make sure they are fully connected and also check hydraulic hoses for damaged or worn spots, If any are found, the hoses should be replaced.

The pre-placement checkout should also include the screed rail or pipe and paving forms. This is one of the most important factors in obtaining a good pour.

The paving form or screed pipe must be accurate and conform to the grade required. For the screed pipe or rails, Bid-Well recommends a 2" schedule 80 pipe and adjustable chair supports spaced 24” on centers.

LIFTING AND PLACING THE MACHINE

When lifting and placing the machine onto the screed pipe or paving forms, reasonable care and judgement should be used.

Make sure to consult the manual for recommendation when lifting the machines longer than the basic 36' length.

Also use lifting clevis provided with the machine.

Once the machine has been placed on the screed pipe or paving forms and positioned for initial set up with the carriage and paving rollers centered on-the machine, make sure all attachments are assembled onto the machine. Start by setting all four corners of the machine, using the leg cranks, making sure the top edge of the carriage rail is the same distance from the top of the screed rail or paving form on all four corners of the machine. (Refer to fig. 1)

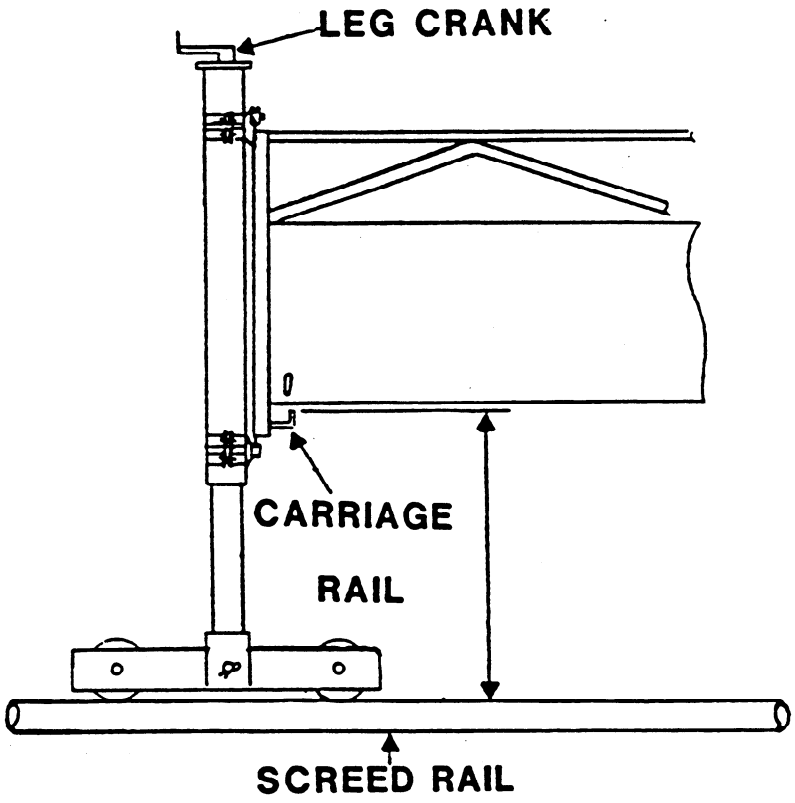


FIG.1

STRAIGHTENING THE TRUSS FRAME

The truss frame of the machine should now be straightened. All attachments, augers, guards, drag pans and all other options, if any should be installed on the machine at this time, with the carriage positioned in the center of the machine.

If catwalk is desired it should be in place to allow for any and all natural deflection in the truss frame. Note: Catwalk is recommended for use only on the main power unit section of the machine.

By using a masonary line of at least 120# tension, tie the string line to the eyebolts located on all four corners of the end panels of the machine. (Refer to fig. 2)

After the string line has been pulled as tight as possible by hand loosen up the inside nut of the eyebolt and back-the nut all the way out to the end of the threads, Then tighten-the nut on the back side to pull the string even tighter.

Measure from the bottom of the carriage rail to the bottom cord of the truss frame. (Refer to fig. 3). Make sure this measurement is the same at all four corners and every hinge point. Nominal is approximately 1 l/2" (one and one half inches).

Next, using five identical wood blocks (2"x6") or something of equal height, place one at every corner of the machine between the string and the carriage rail. (Refer to fig.4)

With the fifth block go to each hinge point, and by adjusting the crown bolts, raise or lower the truss frame until the string just touches the block.

Then double check by eyeball to ensure the truss frame is straight. A 10 Foot straight-edge may also be used for final checking.

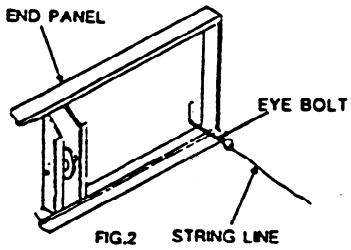


FIG.2

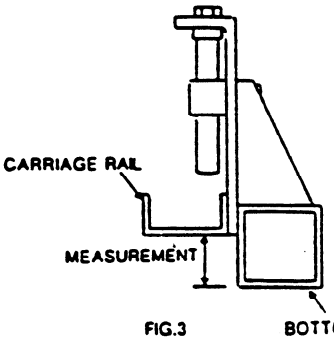


FIG.3

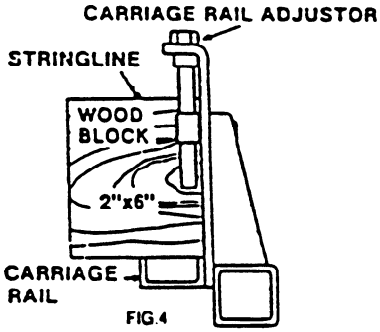


FIG.4

STRAIGHTENING THE CARRIAGE RAIL

This procedure, along with straightening the truss is very critical as it gives the transverse profile of the concrete surface. Use the same string line and wood blocks that was used in straightening the truss frame. Go to each rail adjuster and loosen the l/2" lock nut ONLY l/2 turn. Then by using the adjusting bolt, raise or lower the carriage rail just so the string line touches the top of the wood block. Be sure to retighten all the lock nuts.

ALIGNING THE PAVING ROLLERS

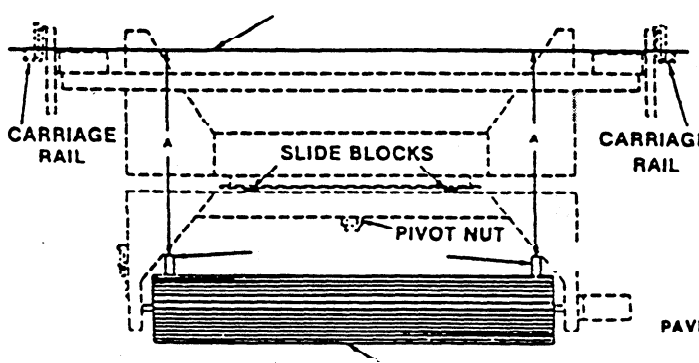
To, adjust the paving rollers and make them parallel to the carriage rail, first check making sure that all slide blocks are in contact with the skew ring of the upper carriage, If they are not all in contact with the skew ring, tighten the turntable pivot nut until the slide blocks make contact.

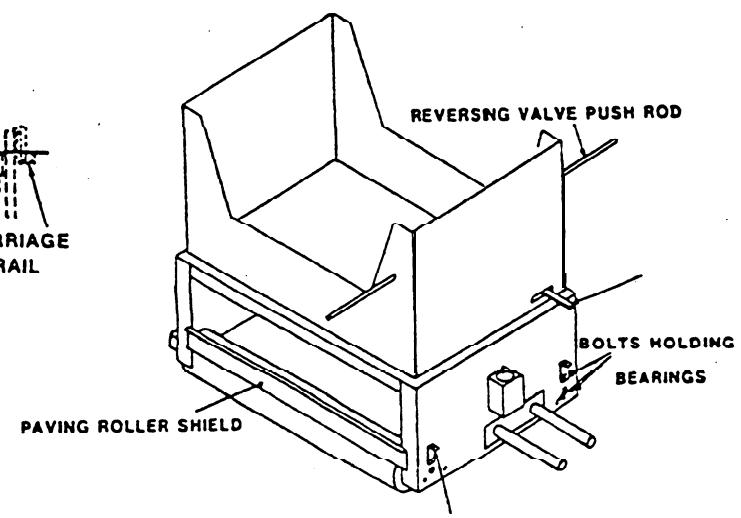
Start the engine of the carriage and engage the on/off lever. Then by pushing or pulling the reversing valve push rod to engage the skew cylinder to skew the lower carriage, adjust the pivot nut until the lower carriage skews freely. When satisfied that it does, shut off the engine and replace the cotter key locking the pivot nut.

Physically align the lower carriage so that it is parallel with the upper carriage.

Remove the paving roller shields, stretch a string line along each side of the upper carriage on the top side of the carriage rail, making sure the string contacts the inner flange of the channel rail. Then using a four foot level as a straight edge, lay it across the top of the paving rollers and measure up to the string line, making all four corners of the paving rollers the same measurement, by using the paving roller adjustment bolts, to adjust the rollers up or down.

Be *sure* to loosen the bolts holding the paving roller bearings in the front of the carriage and the three bolts holding the motor mount plates on the rear of the carriage before turning the adjustment bolts. After all adjustments are made and double checked, retighten all bolts and replace the paving roller shields.

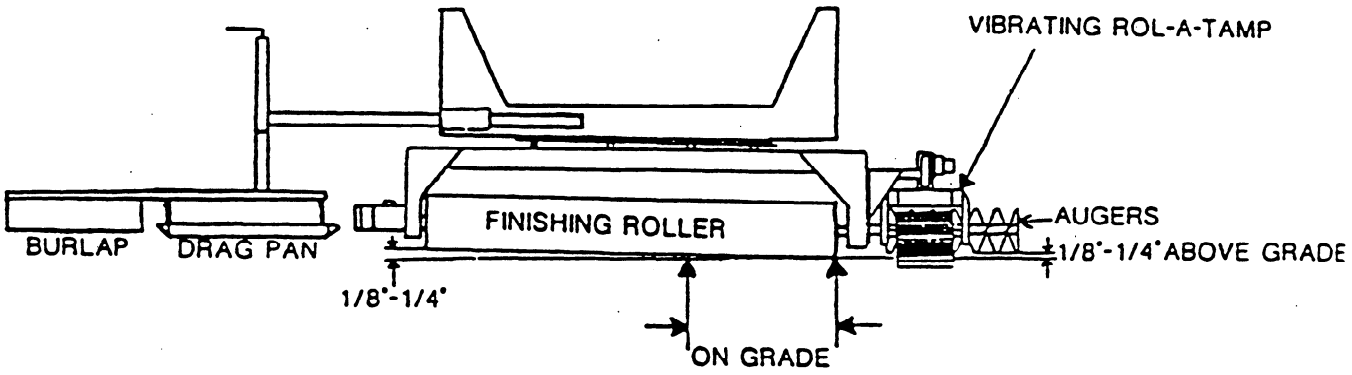


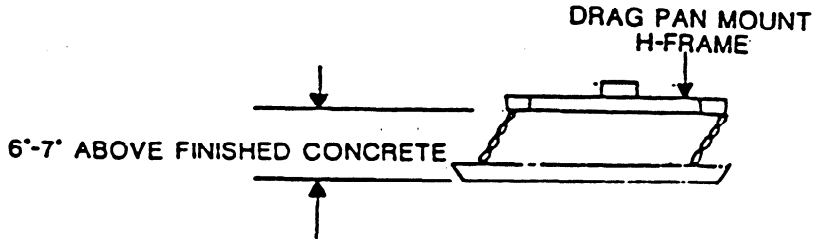


DRAG PAN & AUGER ADJUSTMENTS

The drag pan and astro grass, or burlap drag should be attached at this time adjusting the "H" frame for the pan mount to be approximately 5"-6" above the bottom of the finishing rollers, parallel to the rollers. The chain on the drag pan should be hooked in the 5th link from the end of the chain into the tabs on the H-Frame after the machine has advanced for enough into the pour for installation, The pressure for the astro grass or burlap drag assembly can be adjusted by rotating the square tubes on the rear of the H Frame. Add drag pan configurations.

The bottom edge of the auger flighting should be set (initially) approximately 1/8" - 1/4" above the bottom of the finishing rollers. The key to finishing success is to strike off the excess concrete with the augers and to finish the surface with spinning rollers.





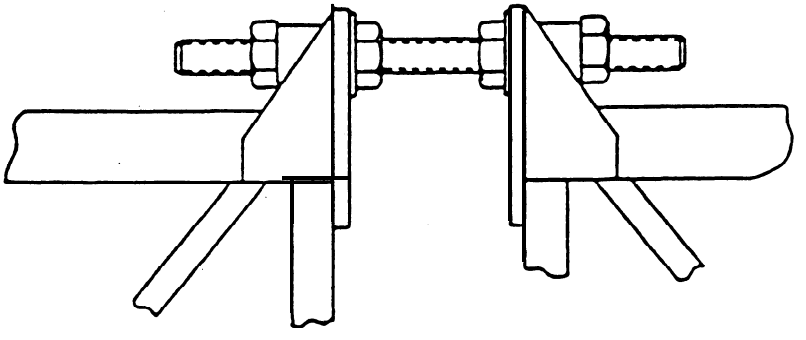
If a crown is required in the deck or slab, it is normally placed in the machine at a hinge point of the truss frame, by using the crown adjusting bolts.

At times due to numerous crown transitions in the roadway or bridge, the use of a powered or manual crown adjuster becomes very beneficial. (Contact the factory or area sales representative for further information concerning the powered, or manual crown ad juster option.)

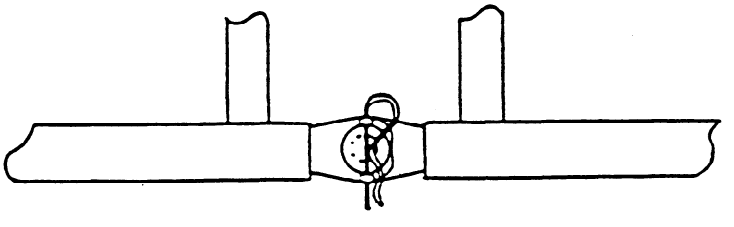
One method for placing a crown in to the machine is by measuring up from a grade point to the top of the carriage rail on both sides of the machine, noting the measurement. Taking the known amount of crown to be put into the truss, use the crown adjusting bolts to raise the center-of the machine to the desired crown, alternating from side to side on the crown bolts.

NOTE: Carriage should be placed at the crown point to allow for the natural deflection in the truss frame.

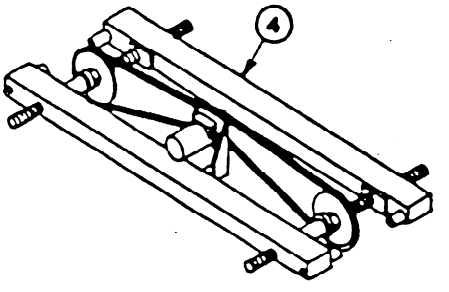
CROWN BOLT ASSEMBLY



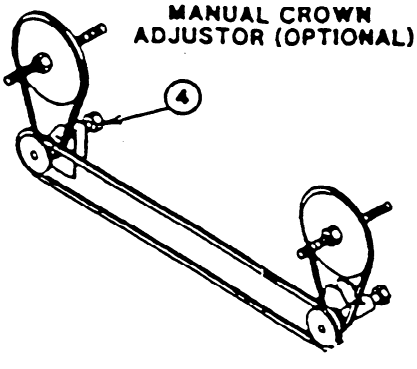
TRUSS INSERT HINGE



POWERED CROWN ADJUSTOR (OPTIONAL)



MANUAL CROWN ADJUSTOR (OPTIONAL)



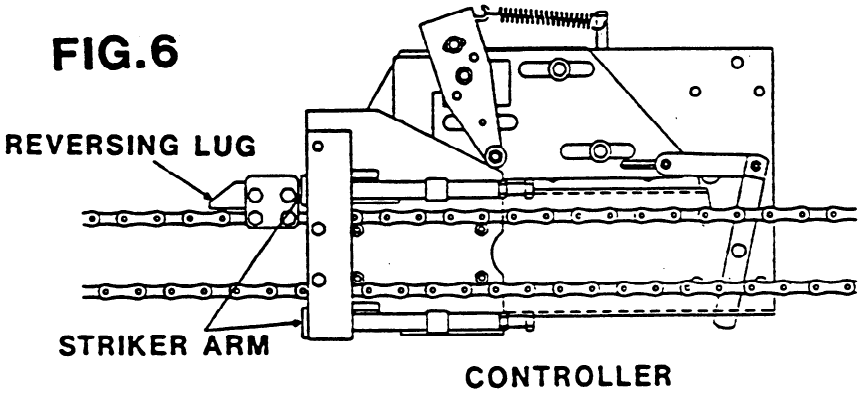
SETTING CARRIAGE TRAVEL

To set the machine for automatic carriage travel reversing, move the carriage to **one** end of the machine stopping it **approximately** 8 inches from the desired maximum paving width.

At **the controller** (refer to fig. 6), place the reversing **lug on** the chain as follows. If the carriage is at the opposite end from the controller, place the reversing lug onto the upper chain; with the carriage coming into the controller, the reversing **lug is on the** lower chain. NOTE: The lug is always placed onto **the** top of the upper chain and onto the bottom of **the lower chain,** with the flat or straight side against the striker arm. The reversing lug must always be attached **on** an outside **link.** Repeat the same procedure for the opposite end of the machine as found in paragraph 1.

When satisfied with the carriage travel settings, move the carriage to one end of **the** machine and as the carriage stops and is about to reverse direction (its maximum travel), stop the carriage from the operator's console. Slide the carriage reversing paddle (refer to fig. 7) until it contacts the reversing rod, and depress the spring cushion approximately 1 inch to 1 l/2 inches, completely shifting the reversing* valve in the carriage. Tighten all bolts on the reversing paddle, **locking** it in place. Repeat the procedure for the opposite end of the machine.

FIG.6



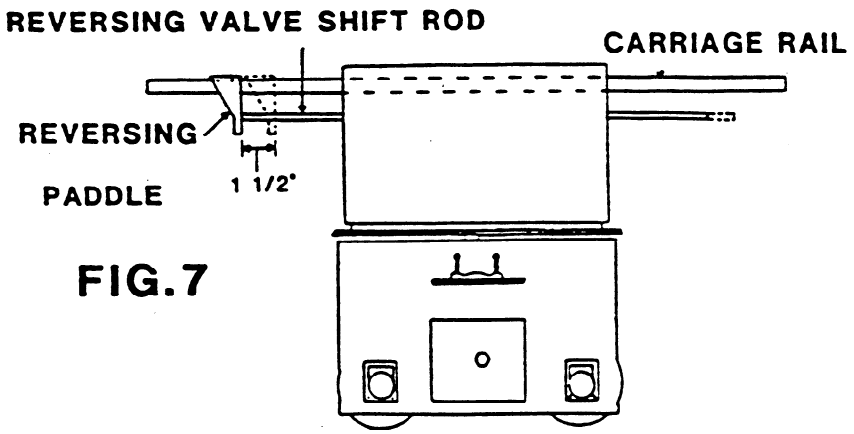


FIG.7

SETTING THE MACHINE TO GRADE

When setting elevation or grade of the paving rollers, move the machine to a place where the front end of the paving rollers are over-the top of a bulkhead, expansion joint or end dam that is on grade. Using the leg cranks, lower the machine so the paving rollers are slightly above or just touching the bulkhead, joint, or end dam. Move the carriage along the graded area from one side of the deck, to the other. When satisfied that grade of the paving rollers is correct both front and rear, check all legs front and rear by measuring from screed rail to the carriage rail. Dimensions should be the same front and rear on each end of the machine.

THE DRY RUN

After the machine has been set to grade, a dry run of the entire deck or slab should be performed. Checking bulkheads, end dams, expansion joints and depth checks can be done by inspecting personnel. During this time it allows the operator to become familiar with the controls and operation of the machine. If any corrections or adjustments are to be made, it is usually done by adjustments in the screed or pipe rail.

Before starting the pour, make sure that all gasoline tanks are full, hydraulic oil levels and engine oil has been checked.

PAVING PROCEDURES AND TIPS

After the pour has started and the machine has moved out from the end bulkhead or has passed over the bulkhead the full length of the paving rollers, raise the back of the machine l/8" by turning the back leg cranks l/2 turn counter clockwise. This will keep the rear of the paving rollers from-digging in and leaving a small ridge of concrete.

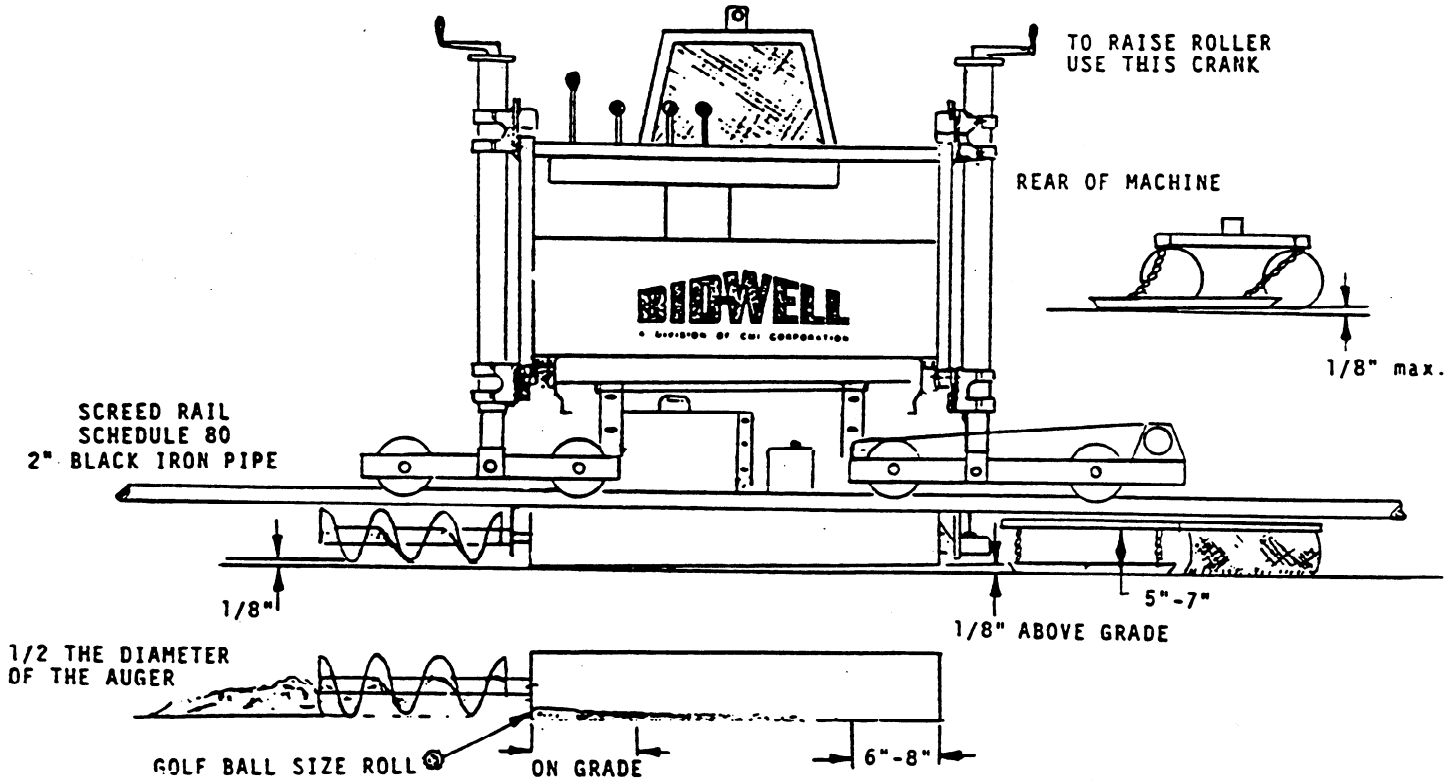
It may be necessary to readjust the augers up or down to obtain or reduce the roll of concrete (optimum is golf ball size in diameter at the front of the paving rollers). As the machine progresses into the pour and clears the bulkhead or end dam, attach the drag pan and astro grass or burlap drag.

When paving concrete going up hill, the back or rear of the 'machine should be raised slightly more than l/8". When paving down hill, the rear of the rollers should be lowered by using the rear leg cranks so there is nearly total contact of the paving rollers onto the slab or deck surface. The optimum roller setting is to have maximum surface contact, but not to leave a ridge or line of concrete coming off the rear of the paving rollers.

PAVING ROLLER ROTATION

Normal paving roller rotation at the beginning of a pour is both paving rollers turning in the same direction and reversing direction or rotation at the end of each carriage pass (for machines equipped with automatic roller reversing).

After progressing into the pour (for machines manufactured since 1984) it maybe an advantage to change direction of one of the paving rollers, viewing the rollers from either end. The right hand roller turns clockwise and the left hand roller turns counterclockwise. This allows the leading roller to roll over and consolidate the concrete, and the trailing roller to -pave or finish the surface without having both rollers reverse direction or rotation. Roller rotation of this manner (in most situations) will achieve a more sealed surface and eliminate excess concrete deposited into the gutter or drain line.



TROUBLE SHOOTING PAVING PROBLEMS

SYMPTOM	Excess concrete on paving rollers.
CAUSE	Augers set to high.
REMEDY	Adjust the augers lower, to obtain a golf ball size roll of concrete at the front of the paving rollers.
SYMPTOM	No concrete on paving rollers.
CAUSE	Augers. set to low.
REMEDY	Raise augers to obtain golf ball size roll of concrete at the front of the paving rollers.
SYMPTOM	Open or pitted surface from paving rollers.
CAUSE	Paving rollers are carrying too much concrete (roll is too large on side of paving rollers). The concrete may be placed out to far in front of the machine.
REMEDY	Adjust augers lower as stated above. Reduce the distance of material, in front of the machine (ideal placement in front of the machine is 6 to 8 feet in front of the machine).
SYMPTOM	Roll of grout coming off the rear of the paving rollers or rollers are leaving a ridge in the back.
CAUSE	The rear of the machine is to low.
REMEDY	Raise the rear of the machine by using the rear leg cranks until the ridge disappears. (Normally the rear of the paving rollers should be 1/8 of an inch higher than the front.)
SYMPTOM	The total finished surface behind the drag pan is not 100% sealed.
CAUSE	?
REMEDY	The use of a burlap drag is suggested, keeping the burlap damp at all times.

BID-WELL
A DIVISION OF CMI CORPORATION
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CANTON, SOUTH DAKOTA 57013
AREA CODE 605 PHONE 987-2603
TELEX 295001

ROLLER **PAVER SET-UP INSTRUCTIONS**

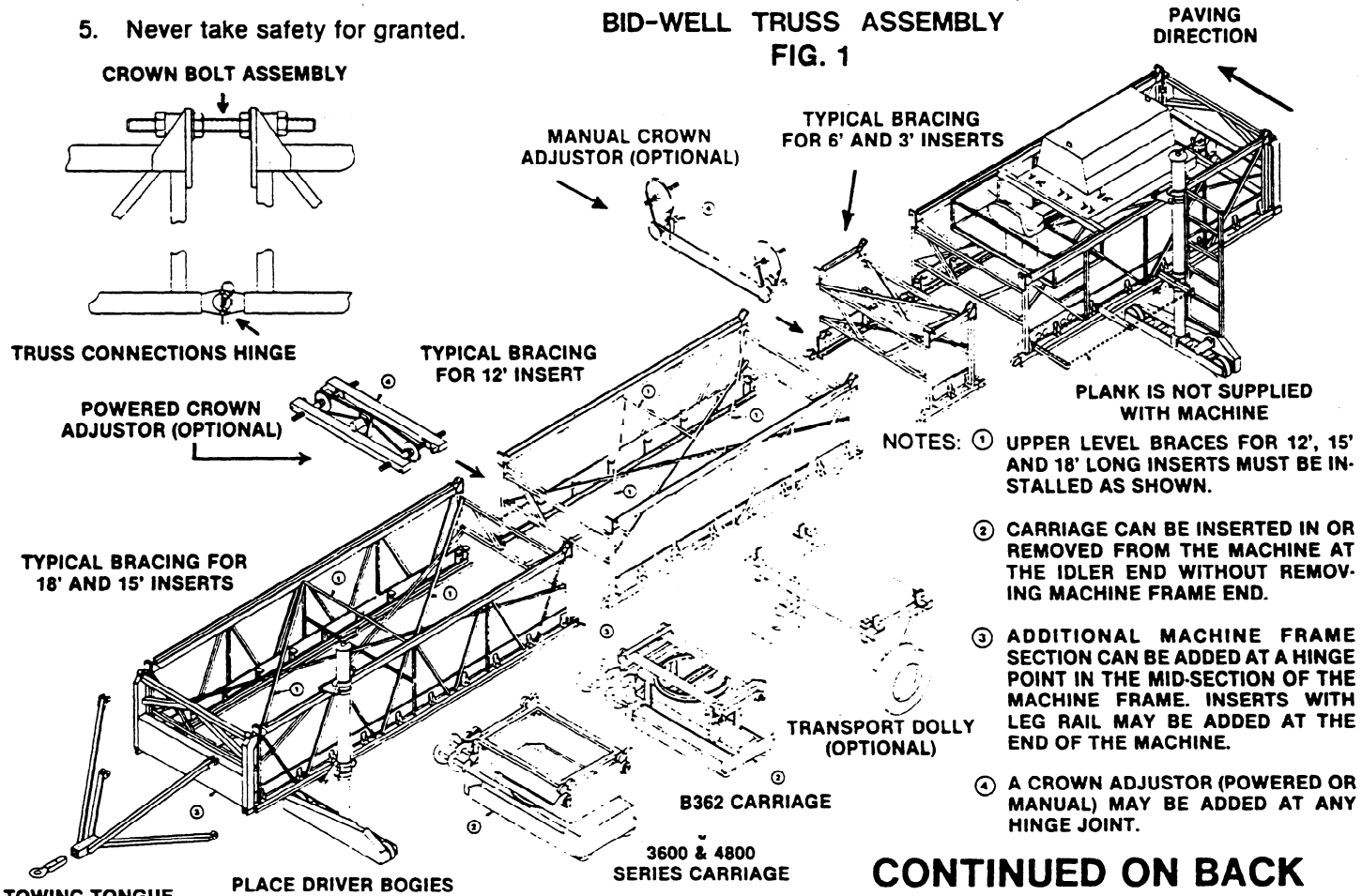
(To Be Used With Manual)

FOR ADDITIONAL HELP CALL BID-WELL (605)987-2603

⚠ CAUTION:

1. Put safety first - read operators manual.
2. Assemble machine with all cross braces and safety shields - consult owners manual for safe lifting.
3. Clear machine of all personnel before starting and operating.
4. Stop engines before cleaning machine.
5. Never take safety for granted.

BID-WELL TRUSS ASSEMBLY
FIG. 1



NOTES:
① UPPER LEVEL BRACES FOR 12', 15' AND 18' LONG INSERTS MUST BE INSTALLED AS SHOWN.
② CARRIAGE CAN BE INSERTED IN OR REMOVED FROM THE MACHINE AT THE IDLER END WITHOUT REMOVING MACHINE FRAME END.
③ ADDITIONAL MACHINE FRAME SECTION CAN BE ADDED AT A HINGE POINT IN THE MID-SECTION OF THE MACHINE FRAME. INSERTS WITH LEG RAIL MAY BE ADDED AT THE END OF THE MACHINE.
④ A CROWN ADJUSTOR (POWERED OR MANUAL) MAY BE ADDED AT ANY HINGE JOINT.

CONTINUED ON BACK

MACHINE SET-UP AND ALIGNMENT PROCEDURES

NOTE: MACHINE SHOULD BE ASSEMBLED ON GROUND BEFORE PLACING ON DECK

1. Assemble machine to fit job requirements - refer to diagram on page 1.
2. Install carriage and position at center of machine.
3. Mount bogies on legs - with drive bogies on rear.
4. **Position legs to fit** screed rails with hinge point over crown (see step 10.)
5. Consult owners manual for safe lift procedures, then lift and place machine on screed rails.
6. Remove truss frame twist with leg cranks.
7. Set carriage rails to the same relative mid-adjustor position at all corners and hinge points. Use carriage rail adjuster.
8. Set a stringline over the carriage rail above carriage wheels and adjust crown bolts at truss hinge points to straighten and align machine frame. (Fig. 2 & Fig. 1)

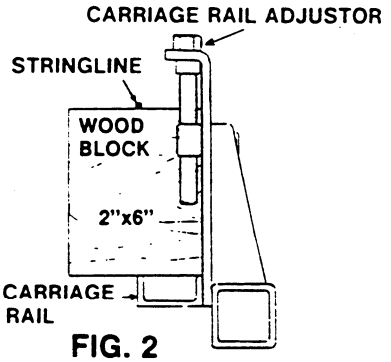


FIG. 2

CAUTION: COMPENSATE FOR STRING SAG - DO NOT USE PIANO WIRE.

9. Adjust carriage rail to stringline with adjustors. (Fig. 2). Set finishing rollers parallel to the carriage rails and to each other. (Fig. 3)
   A) Check and tighten turntable pivot nut to maintain contact at all four slide blocks.
   B) Stretch a stringline across top of carriage rail from front to rear on each side of carriage.
   C) Place a 4 ft. straight edge across ends of both rollers.
   D Measure down from stringline to top of straight edge at all four corners and adjust to same distance.

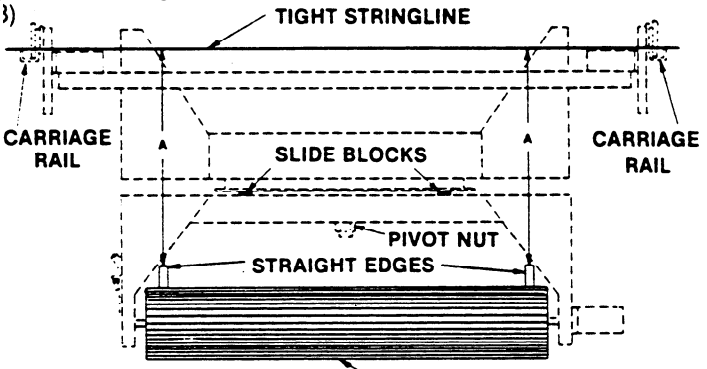


FIG. 3

10. Set crown by placing truss hinge point over crown and adjust by opening or closing top crown bolt. Consult owners manual for safe lift procedures, then lift and place machine on screed rails.
11. Attach reversing lugs to carriage travel chain for suitable paving width.
12. Attach roller reversing push rod activator plates to carriage rail - two inches inside maximum carriage travel width on each side.

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CMI CORPORATION OKLA CITY, USA
P.O. BOX 97
CANTON, SOUTH DAKO
AREA CODE 605 PHONE
TELEX 295001

ROLLER PAVER OPERATING INSTRUCTIONS

NORMAL MACHINE OPERATION

1. Carriage travel direction automatically reverses at the end of each carriage pass.
2. Finish rollers automatically reverse rotation and skew slightly at the end of each carriage pass.
3. Machine automatically travels forward a preset distance at the end of each carriage pass.

FINAL GRADING ADJUSTMENTS

1. Set front and rear ends of finish rollers to final grade using leg cranks.

   EXAMPLES:

   A) Grade to a bulkhead, end dam or expansion joint.

2. Set augers approximately 1/8 to 1/4 inch above grade of rollers. Use crank with pin lock.
3. Dry run machine from end to end of pour to preload falsework and check bulkheads.

   A) Match grade of bulkheads and end dams by feathering screed rails, but do not change machine leg cranks

FINAL PAVING ADJUSTMENTS

1. Set rear end of finish rollers approximately 1/8 to 3/16 inches above front end by raising rear of machine 3/4 to 1. turn of leg crank.
2. Augers may need to be readjusted during the pour, to maintain a golf ball size roll of concrete at the front of rollers, which should feather out no more than half way back.
3. Rear leg setting may need to be readjusted at either side, during the pour, so rear of roller is just touching the concrete without leaving a mark.
4. Drag pans are attached to pull in either direction. Adjust to obtain a slight leading edge rise.
5. Astro turf or burlap drag may be attached and adjusted to give surface texture.

CONTINUED ON BACK

CAUTION Before starting machine, all safety shields to be in place, set all controls to off or stop position, and clear all personnel from machine.

TO START ENGINES

1) Set power selector level to 'stop'
2) Start engine and allow for warm-up -
3) Set engine to operating speed

TO TRAVEL MACHINE

1) Set machine travel direction control levers to direction needed
2) Set power selector lever to machine travel
3) Use machine travel speed lever to start, travel and stop machine

TO PAVE - CARRIAGE SETTINGS

1) Set power lever at end of carriage to 'run'
2) Set finish roller rotation direction with valves on rear of carriage so both rollers rotate up into concrete on each pass.

TO PAVE - CONTROL CONSOLE SETTINGS

1) Set machine travel direction control levers
2) Start carriage travel, by moving power selector lever to 'pave'
3) Select automatic machine advance distance with machine travel speed control

1) Slowly move power selector lever to 'stop'
2) Shift carriage travel reversing lever in direction of travel required
3) Slowly move power selector lever back to 'pave'

TO STOP AUTOMATIC FINISH ROLLER REVERSING

1) Pull valve knob out on side of carriage
2) Set finish roller rotation in desired direction with valves mounted on rear of carriage (for Model 362, change quick disconnect hoses)

TO STOP AUTOMATIC SKEWING OF FINISH ROLLERS

1) Disconnect skew cylinder by removing mounting pin and secure skew ring clamps.

CMI BID-WELL

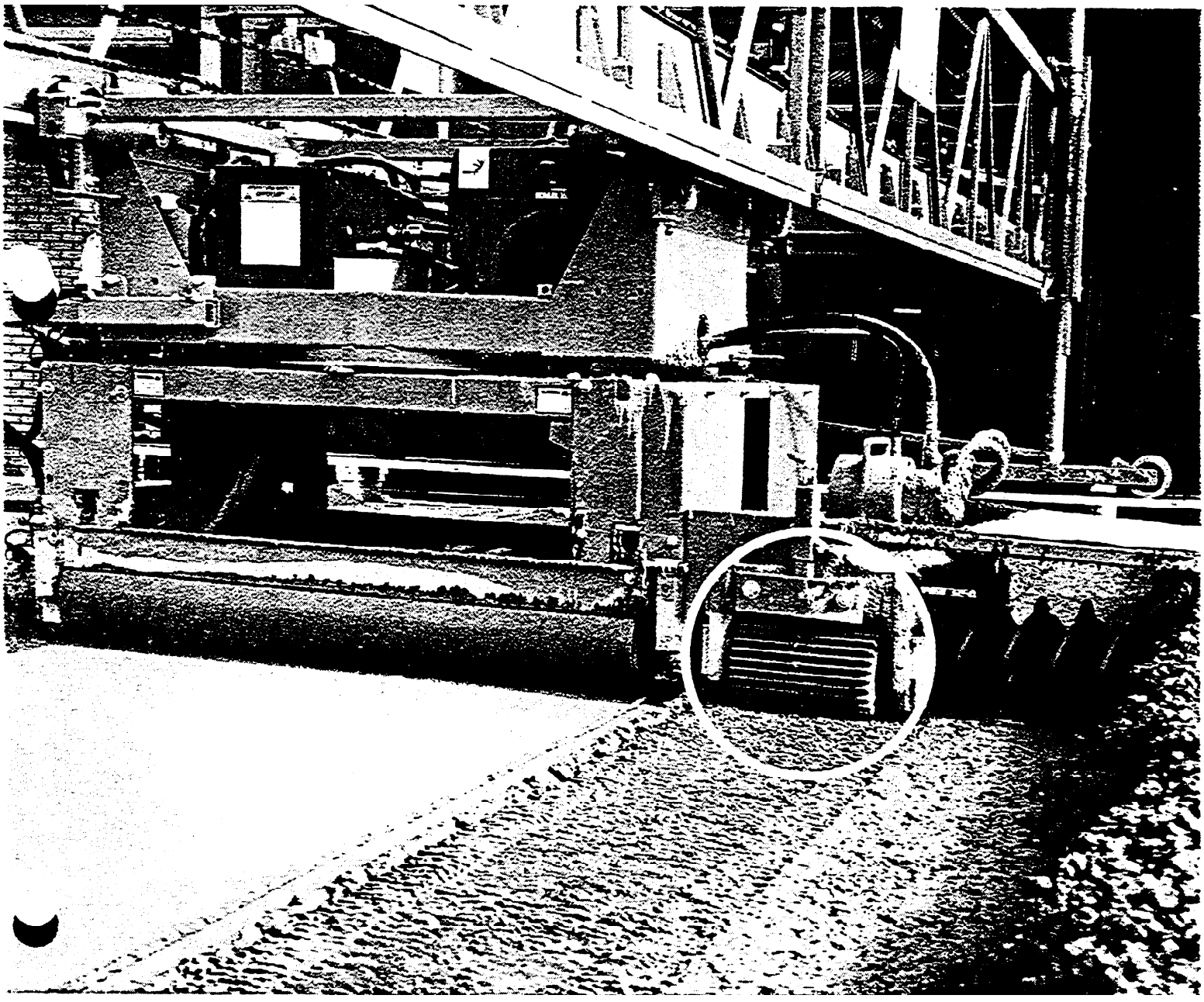
ROL-A-TAMP

for the BID-WELL ROLLER PAVER

The BID-WELL Rol-A-Tamp finishing attachment provides a means of achieving a more uniform concrete surface with desired density. This facilitates sealing difficult to finish concrete due to harsh mix designs, unpredictable delays, low slump specifications, and wind exposure causing abnormal surface drying.

The R&A-Tamp, which mounts from the paving carriage, utilizes two freewheeling finned rollers. The finned rollers can be leveled horizontally and adjusted vertically.

Vibration is provided to prevent concrete from adhering to or building up on the finned rollers. The vibration also helps to obtain a more uniform and consolidated surface.

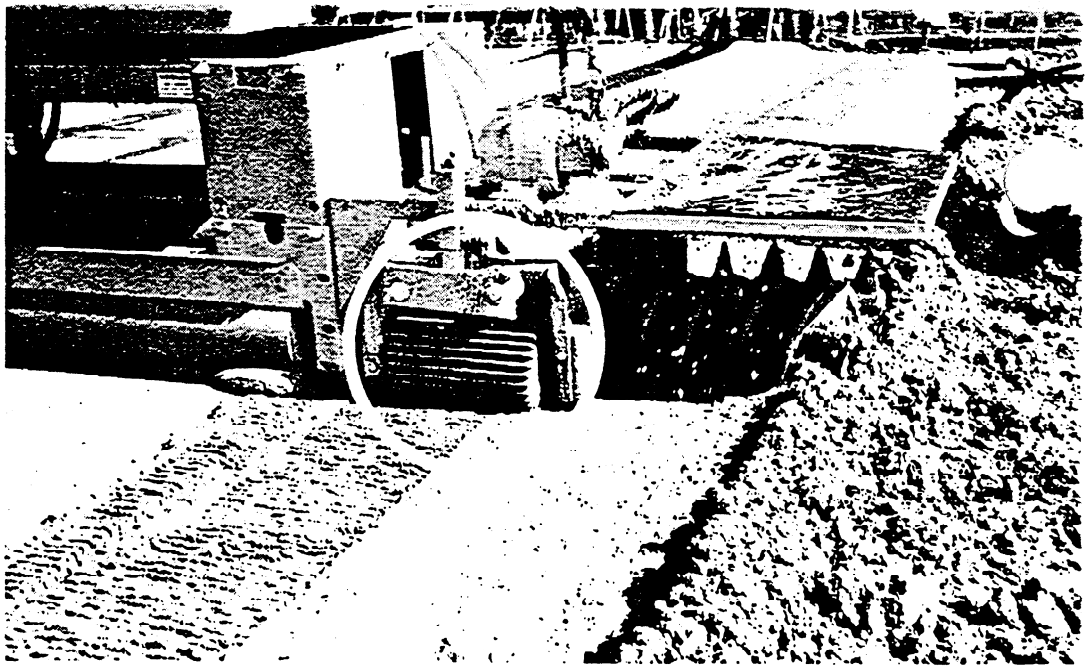


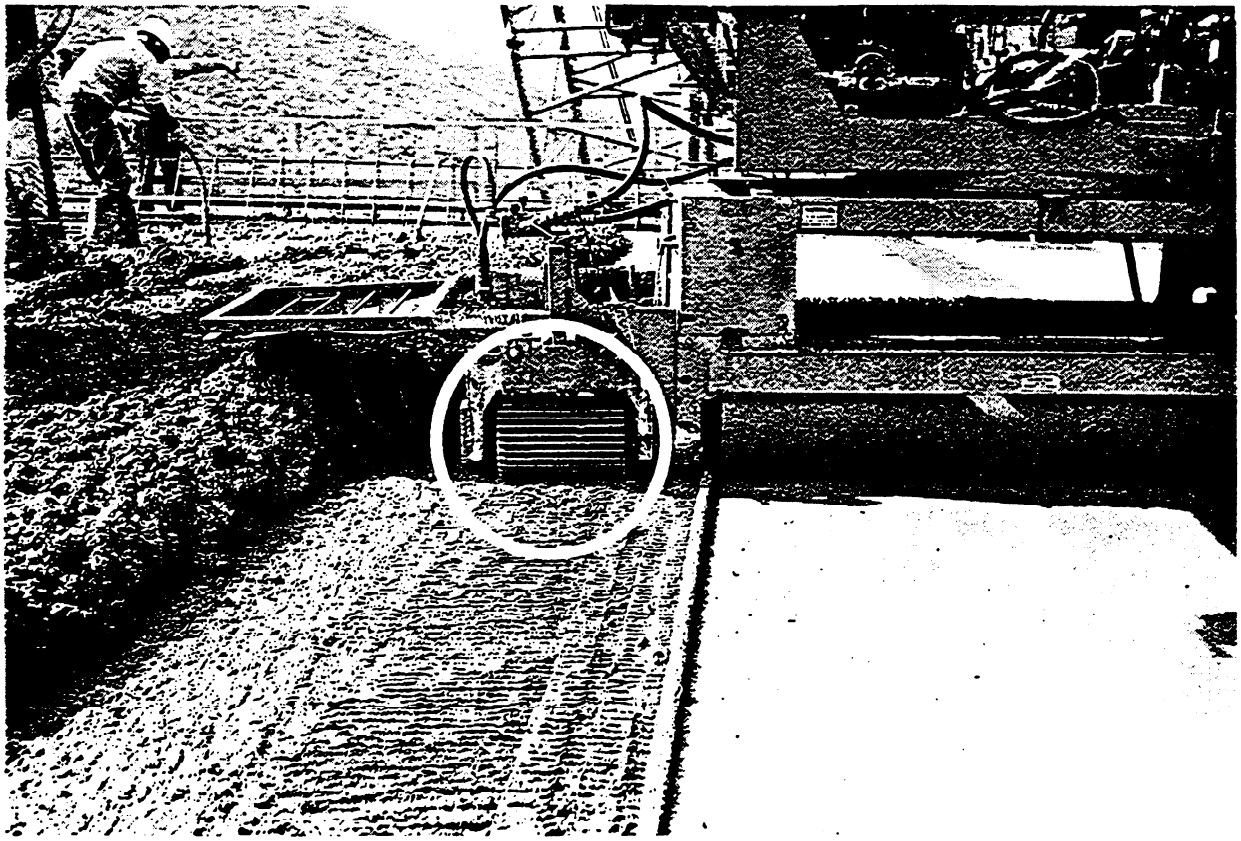
BID-WELL®

ROLLER TAMPER

AVAILABLE ON
48202, BR202, 36202
MODELS

patent pending





CMI BID-WELL

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ROL-A-TAMP SET UP INSTRUCTIONS

(To Be Used With Manual)

FOR ADDITIONAL HELP CALL BID-WELL (605)987-2603)

⚠ CAUTION:

1. Put safety first - read operators manual.
2. Assemble machine with all cross braces and safety shields - consult owners manual for safe lifting.
3. Clear machine of all personnel before starting and operating.
4. Stop engines before cleaning machine.
5. Never take safety for granted.

SPECIFICATIONS FOR BID-WELL ROL-A-TAMP

The BID-WELL Rol-A-Tamp finishing attachment provides a means of achieving a more uniform concrete surface with desired density. This facilitates sealing difficult to finish concrete, due to harsh mix designs, low slump specifications, wind exposure causing abnormal surface drying and unforseen and unpredictable delays.

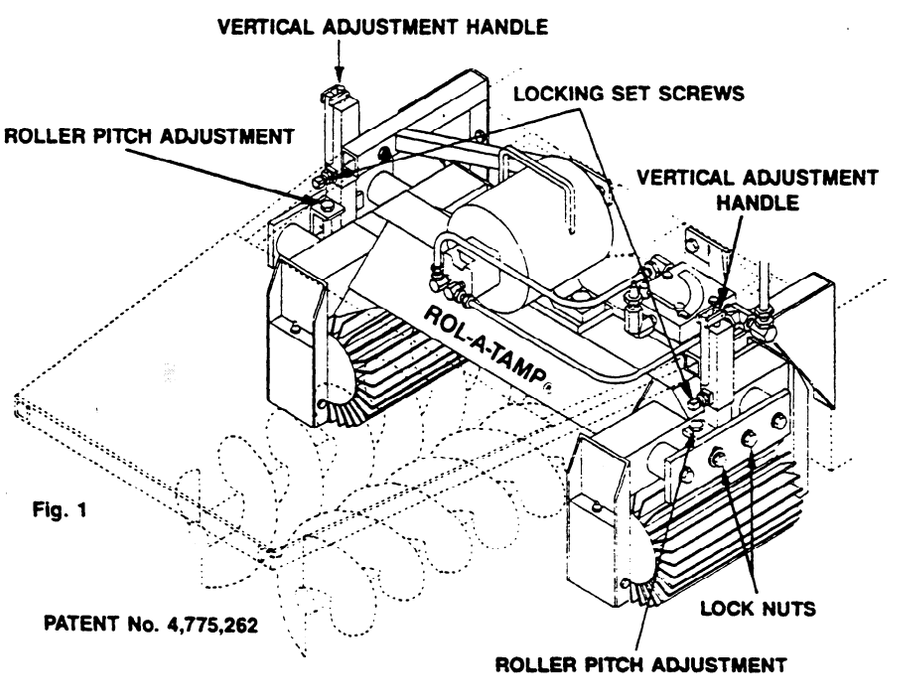

Fig. 1

PATENT No. 4,775,262

CONTINUED ON BACK

ROL-A-TAMP SETUP AND ALIGNMENT PROCEDURES

The Rol-A-Tamp's finned rollers are vertically adjustable from 1/2 inch above concrete grade to 1/8 inch below concrete grade. The depth of penetration can be varied, according to job requirements. A 1/8 inch penetration will normally yield good results.

1. Place a four level under the finishing rollers and under the Rol-A-Tamp. Refer to fig. 2.
2. Loosen locking set screws. Refer to fig. 1
3. Loosen lock nuts for-the roller pitch adjustment. Refer to fig.1
4. Set the front of the rollers approximately 1/8 of an inch higher than the rear of the rollers, by using the pitch adjustment. Refer to fig. 1
5. Pitching the front end of the finned rollers up 1/8 to 1/4 of an inch allows the Rol-A-Tamp to become parallel to the concrete surface, when the rear of the machine is raised using the rear leg cranks.
6. Lower the finned rollers by using the vertical adjustment handles. Refer to fig. 1
7. Set the finned rollers to 1/8 of an inch below the finishing rollers or desired depth. Refer to fig. 3. Maximum recommended depth 3/16.
8. Lock all set screws and lock nuts.
9. Run the vibrator at the speed that does the best job of keeping the fins of the rollers clean. (Do not exceed 5000 vibrations per minute, normally 3500-4500 VPMS is a good operating speed)

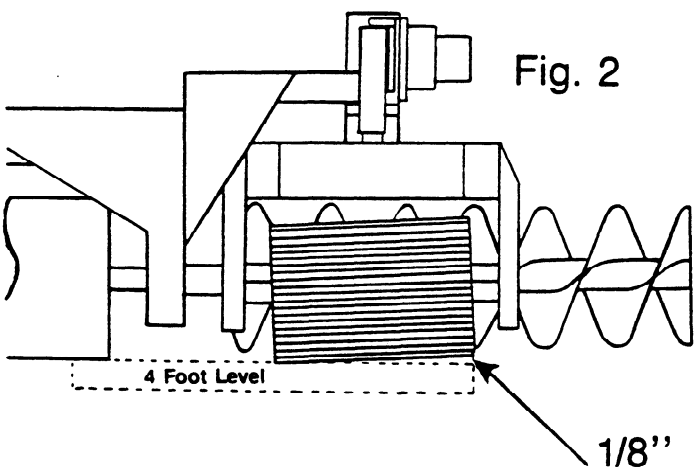

Fig. 2

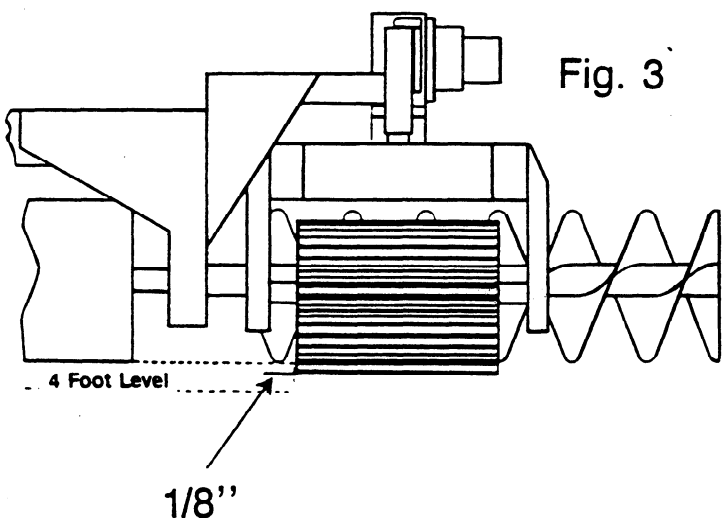

Fig. 3

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SPECIFICATIONS FOR BID-WELL ROL-A-TAMP

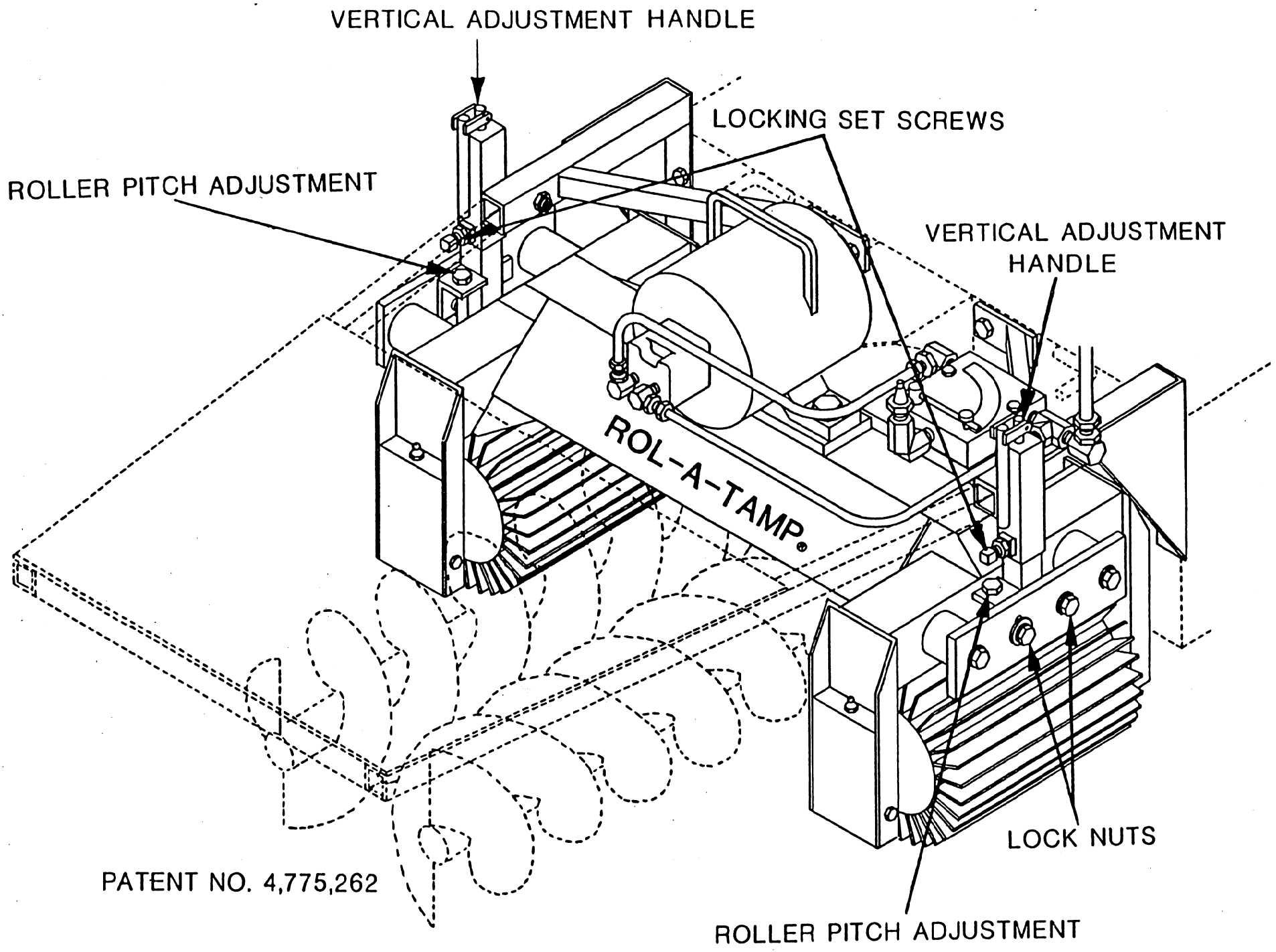
The BID-WELL Rol-A-Tamp finishing attachment provides a means of achieving a more uniform concrete surface with desired density. This facilitates sealing difficult to finish concrete. Because of harsh mix designs, low slump specifications, wind exposure causing abnormal surface drying and unforseen and unpredictable delays.

The Rol-A-Tamp which mounts from the finishing carriage, utilizes two free-wheeling finned rollers, 11" long - 7 1/2" O.D. with fins 1" long 3/16" thick. The finned rollers are positioned between the leveling augers and finishing rollers. The finned rollers are vertically adjustable from l/2" above concrete grade to l/8" of fin penetration below concrete grade. recommend 3/4" for Latex overlays

Vibration is provided to prevent concrete from sticking and/or building up on the roller fins. The vibration frequency is variable up to 5000 VPM.

The easy vertical adjustments of the RobA-Tamp makes possible quick "on the go" adjusting of the penetration of the fins.

A fin penetration of approximately l/8" will yield best results and the depth of penetration will vary according to concrete conditions.



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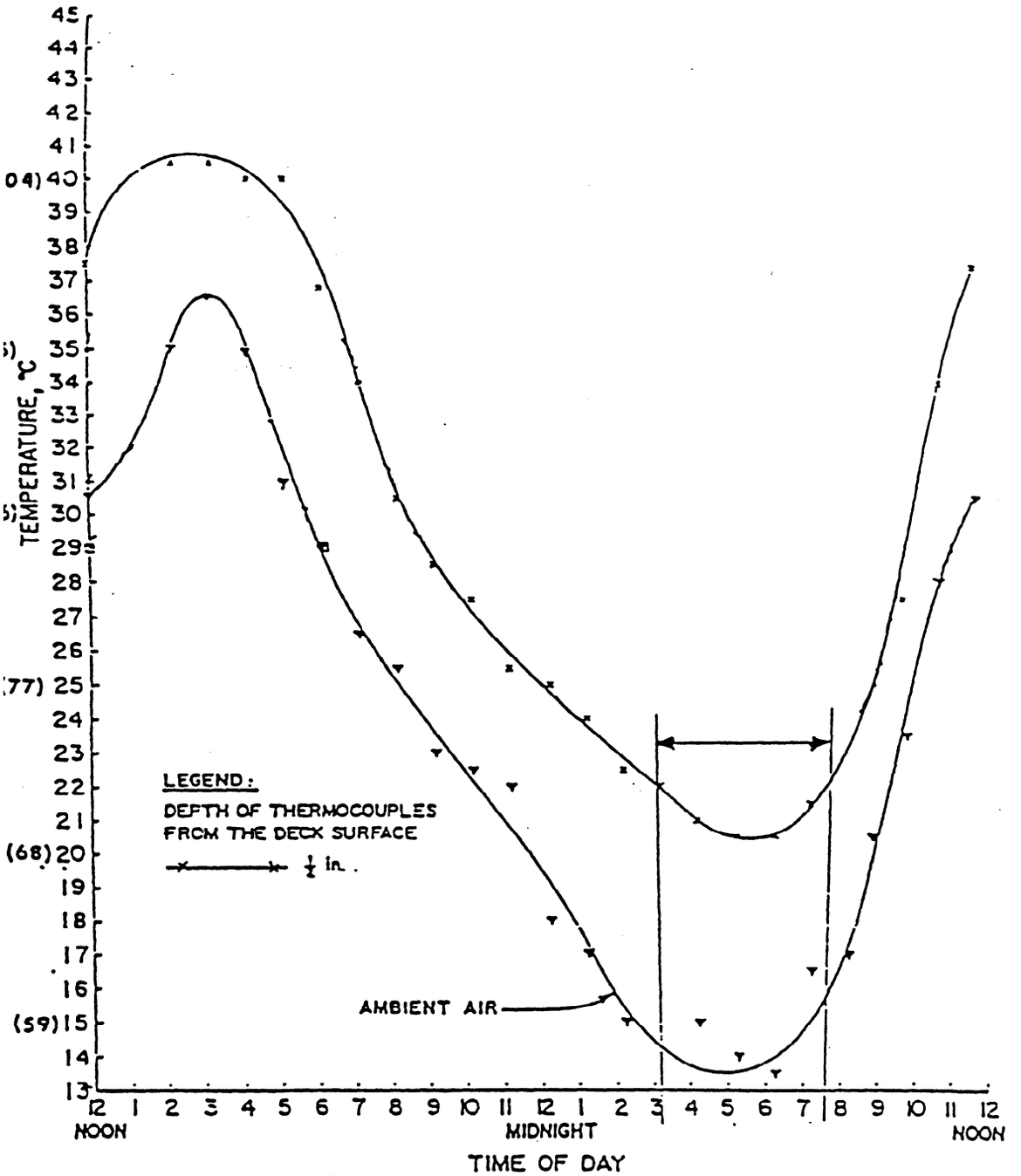


TYPICAL TEMPERATURE DISTRIBUTION IN

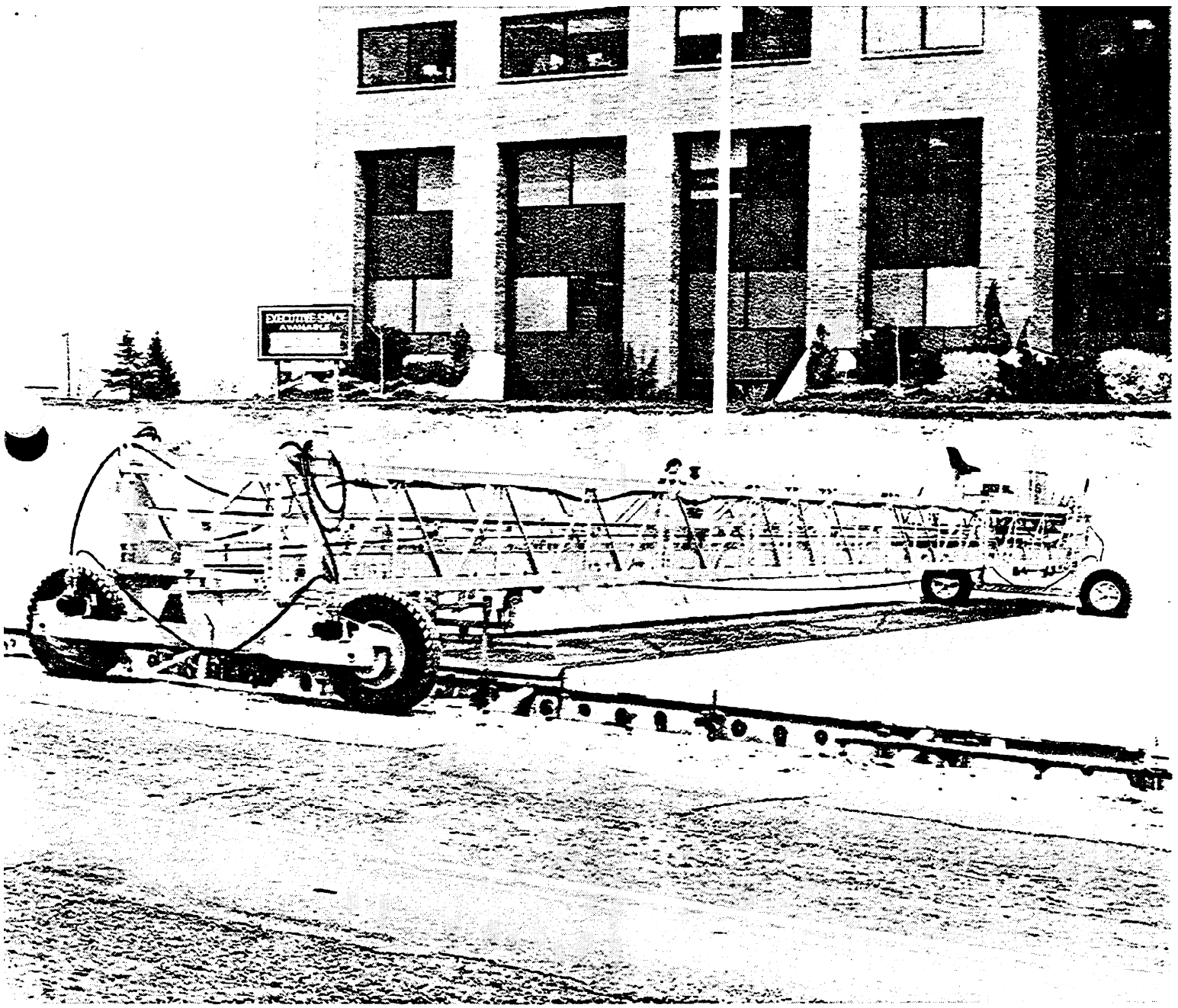
A THICK SLAB DECK

REF: ONTARIO MINISTRY OF TRANSPORTATION

CMI BID-WELL

TC3000A and TC3000M

TEXTURING-CURING MACHINE



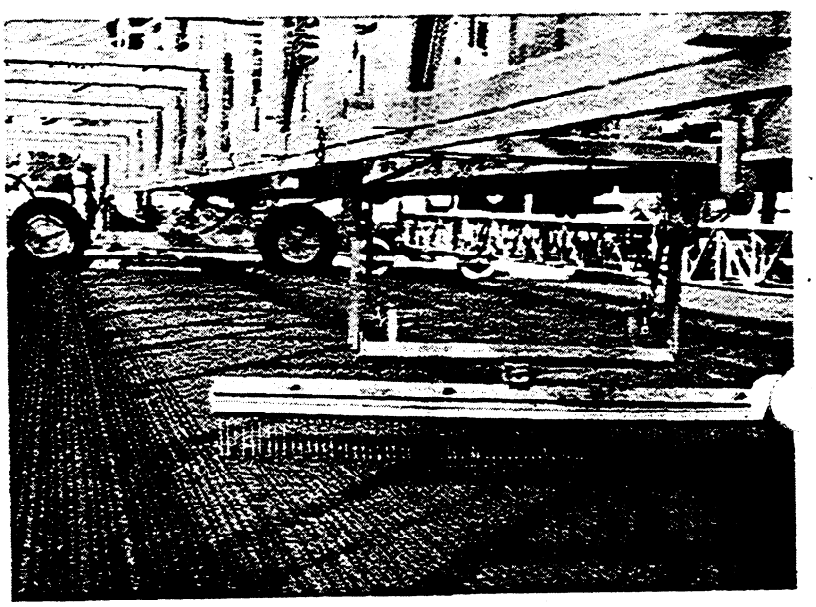
Look to the Leader!

TC-3000M textures concrete as the rake passes in each direction.

THE RIGHT EQUIPMENT FOR THE JOB TO MAKE YOU THE MOST PROFIT

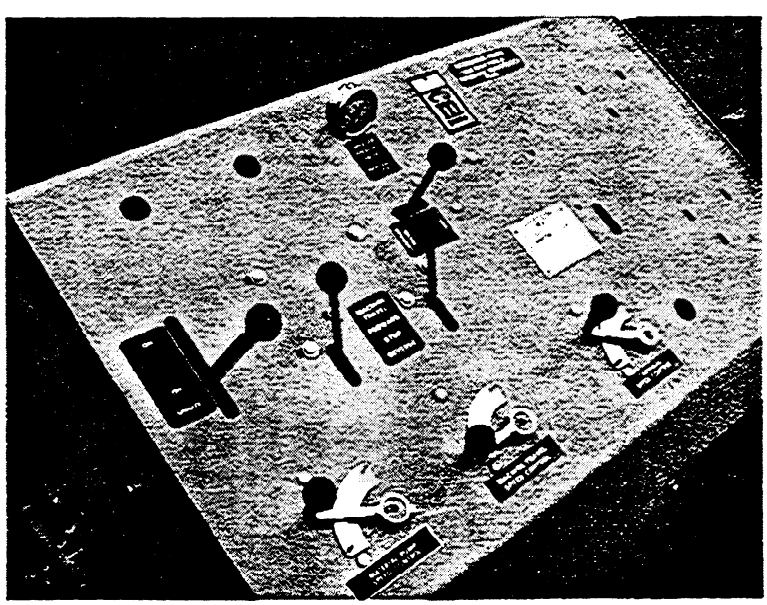
Bid-Well's versatile Texturing-Curing Machines (TC-3000A and TC-3000M) are fully adjustable to accommodate any width up to 50 feet. The 5 foot steel tine texturing rake engages the concrete as it passes in each direction and can be purchased to meet any specification. The curing system is a hydraulically driven pressure system and will handle any type of spray.

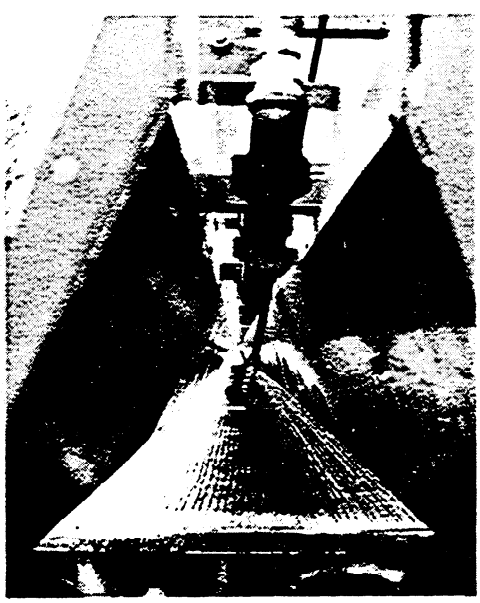
The TC-3000A utilizes two hydraulic sensors to sense a stringline for automatic steering.



TC-3000M applies curing material to city street (above). Spray nozzles inside windshield (below right).

(Right) Easy to operate control console showing blanks for optional accessories.





BID-WELL TC-3000 TEXTURING-CURING MACHINE

MACHINE FRAME

All welded structural steel tubing construction is used for strength with minimum weight. Truss sections are pm connected for fast set-up time and crown ability. Insert sections to extend machine length are available in 12 (3.7m). 6 (1.8m) and 3 (0.9m) foot lengths.

ENGINE

Air cooled. 4-cycle gasoline powered, twin cylinder opposed. 20 HP (14.9 kw) with 12 volt starter and alternator. 19 HP (14.1 kw) 2-cylinder 4-stroke Hatz Diesel is available at extra cost.

MACHINE TRAVEL

Positive Hydraulic 4-wheel drive. Manual controls give-forward. reverse and self braking action. Variable speed from 0 to 200 FPM (0 to 60 mPm). 7.00 x 15 traction-tread tires.

MANUAL STEERING, TC3000M

Manual Steering is accomplished by the operator from the control panel. The machine travels straight forward and the operator makes skid steering corrections by slightly "feathering" the appropriate directional valve while the machine is moving.

AUTOMATIC STEERING, TC3000A

The machine operator may select automatic (forward and reverse) steering from the control panel. Two Hydraulic Steering Sensors are used to sense the stringline. one for forward motion and one for reverse motion. When desirable, Manual Steering can be accomplished from the operators control panel.

TEXTURING

The texturing carnage travel speed is variable up to 90 FPM (30 mPm). The 5 foot (1.5m) long texturing comb is raised and lowered at the end of each texturing pass. The texturing comb may be ordered with tines spaced to meet the job specification requirements.

SPRAYING SYSTEM

A continuous spray bar and windshield run the length of the machine. Adjustable Position Nozzle drops are located at each end for spraying the edges of the concrete slab. Spray Nozzles are spaced at 18 inches (45.7cm) on the spray bar for double spray coverage with a single spray.

FILTRATION

A 2 inch (5.1cm). 20 mesh. wye suction strainer strains the material entering the pump. A 1 1/2 inch (3.2cm). 40 mesh wye strainer strains the material entering the spray boom and each nozzle has a 50 mesh screen to filter the material entering the nozzle.

NOZZLES

Stainless steel nozzle tips flow approximately 0.3 gallons (1.1L) per minute at 40 PSI (2.7 BAR). Each nozzle IS equipped with a diaphram check to prevent drip. Nozzle design provides instant access to clean individual nozzle tips and screens. Selective nozzles may be quickly "plugged" for con. figuratlon changes.

SPRAY TANK

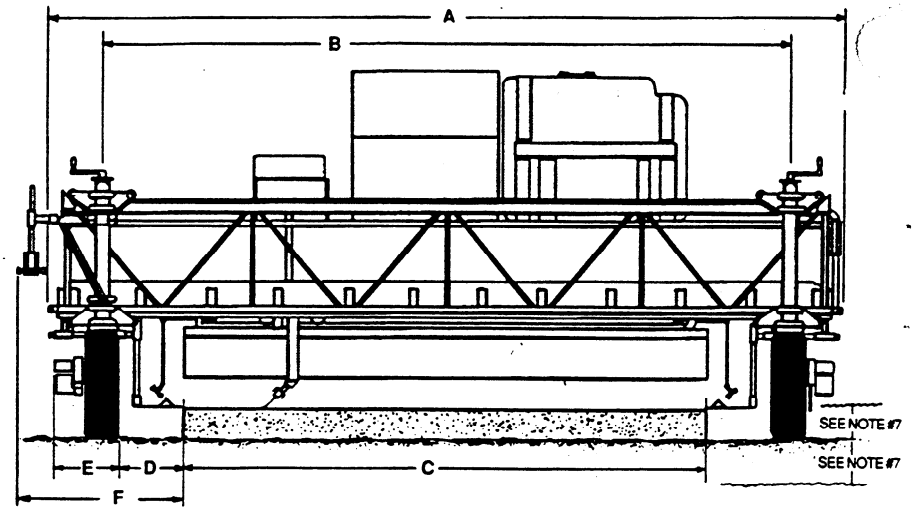
150 gallon (567L) capacity tank has built-in mixing jets for best mixing. The hydraulically driven Roper pump continuously circulates curing material through mixing jets to keep the material ready to spray. Spray tank is filled utilizing spray system and 25 foot long suction hose to transfer from barrels.

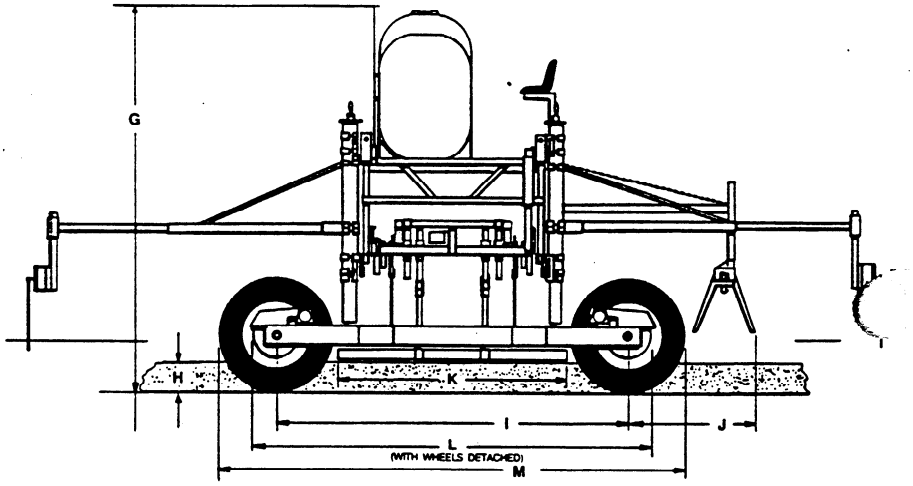
SPRAY SYSTEM CLEANUP

System may be flushed with cleaning solvent or water utilizing system pump without emptying curing material from tank.

TOWING

Trailer Dolly and Towing Tongue are available for the machine.





DIMENSION KEY (9)

All dimensions are for machine shown; 18' (553m) main truss section over an 8" thick concrete slab.

KEY LETTER	FOOTNOTE KEY	DESCRIPTION		DIMENSION FOOT	M
A	(1)	Overall Truss Sect Ion Width		18.16'	5.53m
B	(2)	Leg Span Maximum		15.67'	4.78m
C		Concrete Slab Width		12'	3.66m
D	(2)	Concrete Slab to Inside of Tire		17"	43.18m
E		Tire to Outside of Drive Motor		19¼"	44.45cm
F	(3)	Slab to Stringline	MAX	84"	213.36cm
			MIN	42"	106.68cm
G	(4)	Overall Height		8.33'	2.54m
H	(4)	Concrete Slab Thickness		8"	20.32cm
I		Wheel Base		7.73.	2.36m
J		Distance from Wheel Center to Spray Boom		2.75'	0.84m
K		Comb length		5'	1.52m
L	(6.8)	Front-to Rear Length		8.98'	2.73m
M	(6.8)	Front-to-Rear Length with Wheels		10.23'	3.12m

FOOTNOTE

(1) Machine may be lengthened by adding 3.6 and 12 foot (0.9. 1.8 and 3.6m) frame sect ions.

(2) Each machine leg moves on own dolly to accommodate different width pours. Tire to slab distance can be adjusted to suit job requirements.

(3) Sensor mounts are adjustable to accommodate different string height and distances.

(4) The legs can be vertically adjusted for slab depths up to 24 inches.

(5) Spray boom is quickly adjustable for different spray heights to optimize spray coverage.

(6) To facilitate transporting the machine, the spray shield can be slid close to the machine.

(7) The machine wheels on either end can be vertically adjusted with the leg cranks to ride on a grade from 2 inches above the finished concrete to 24 inches below.

(8) The entire wheel assembly may easily be removed from both machine ends when necessary for overall width transportation restrictions.

(9) The machine shown is the Model TC3OOOA with the automatic steering system. All dimensions shown, except Dimension "F", will be the same for the Model TG3OOOM with the manual steering system.

Look to the Leader!

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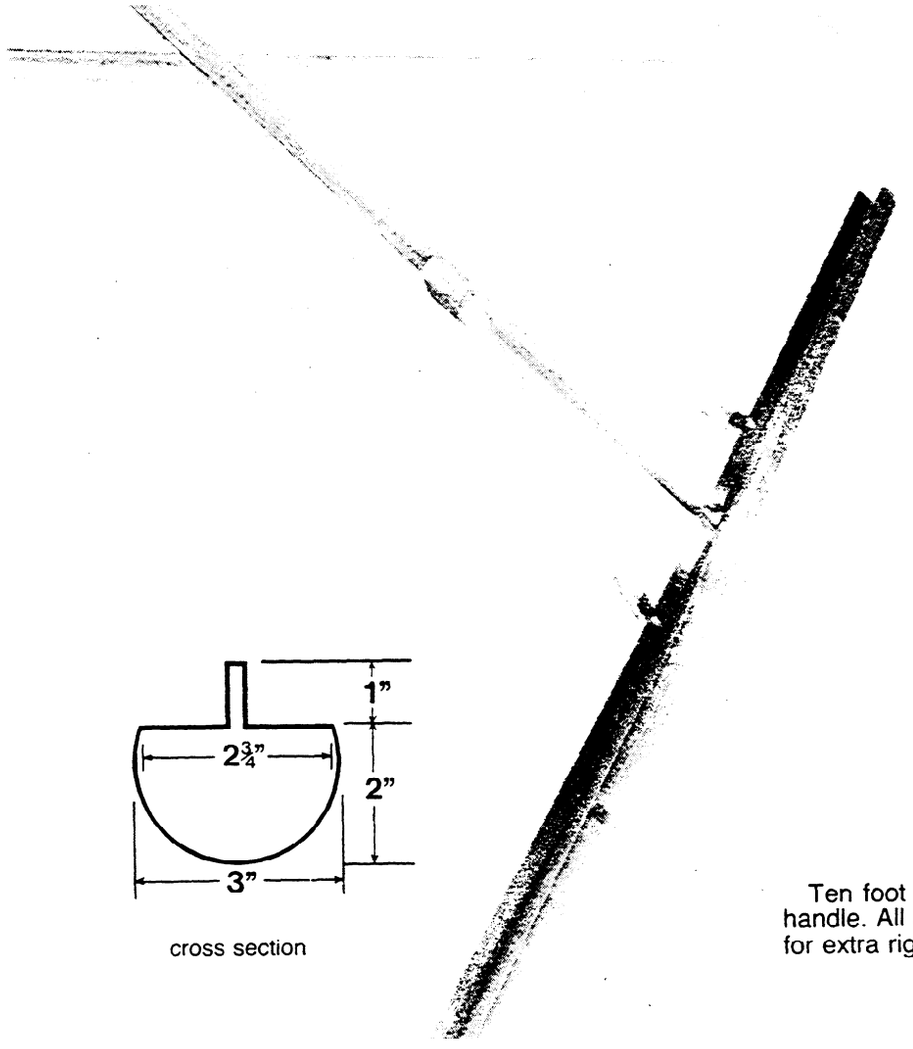
189SX 5M Printed in U.S.A.

BID-WELL®

GROUT ROD STRAIGHT EDGE



cross section

Ten foot long straight edge with ten foot long handle. All aluminum. Half-round and rib backed for extra rigidity and light weight.

Write or call for complete information today -

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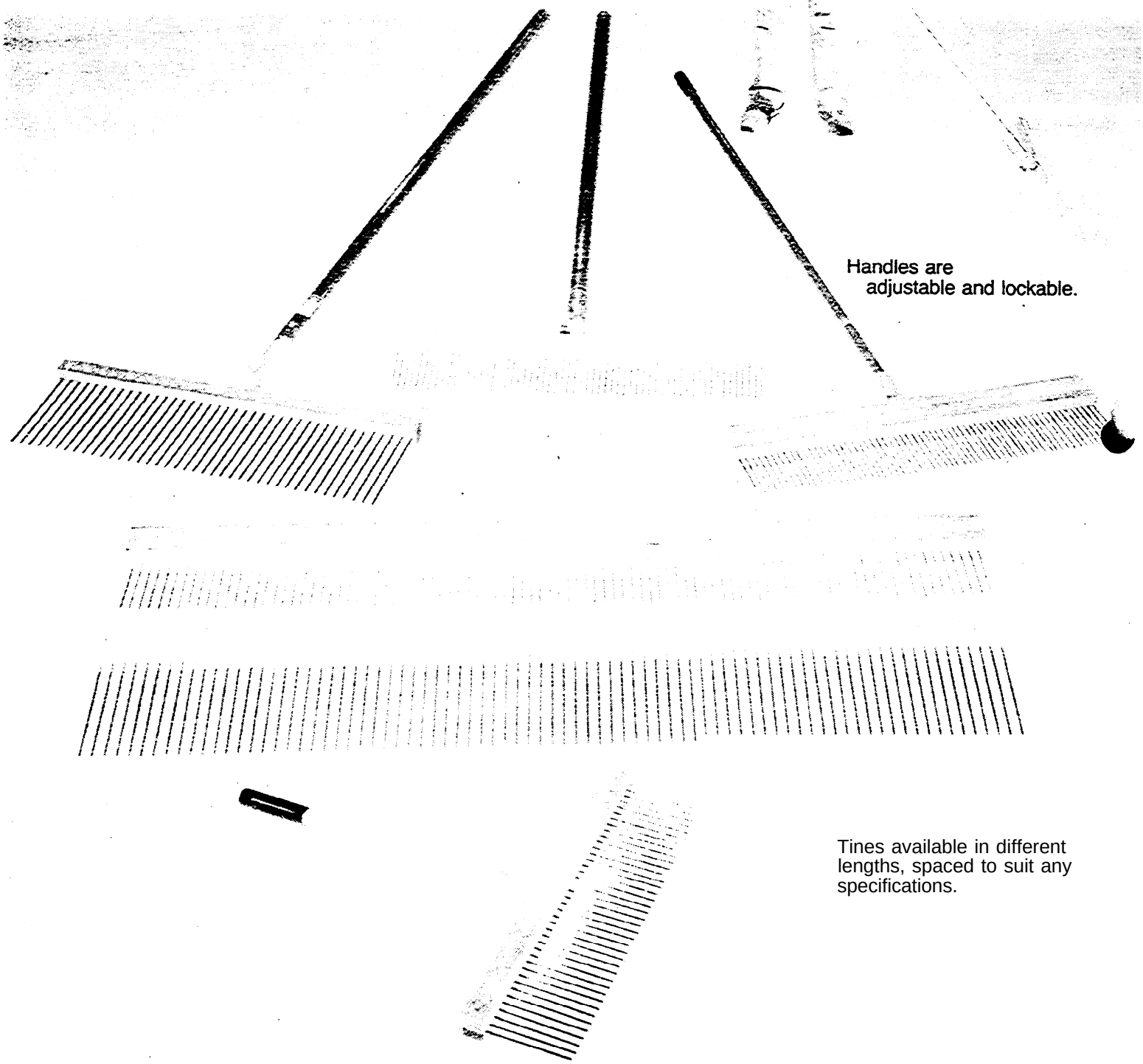
Telephone (605)987-2603 Telex 295001

cmi BID-W

TEXTURING RAKE



Handles are adjustable and lockable.

Tines available in different lengths, spaced to suit any specifications.

Write or call for complete information today -

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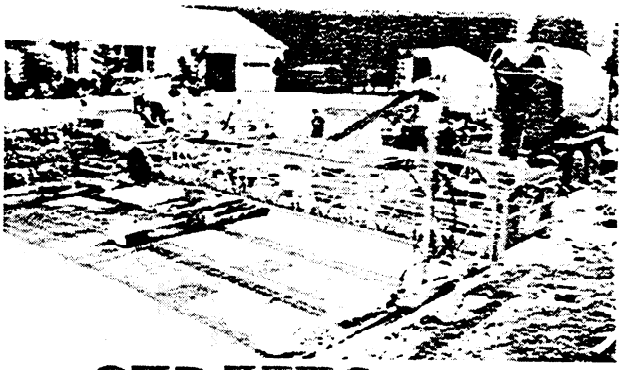
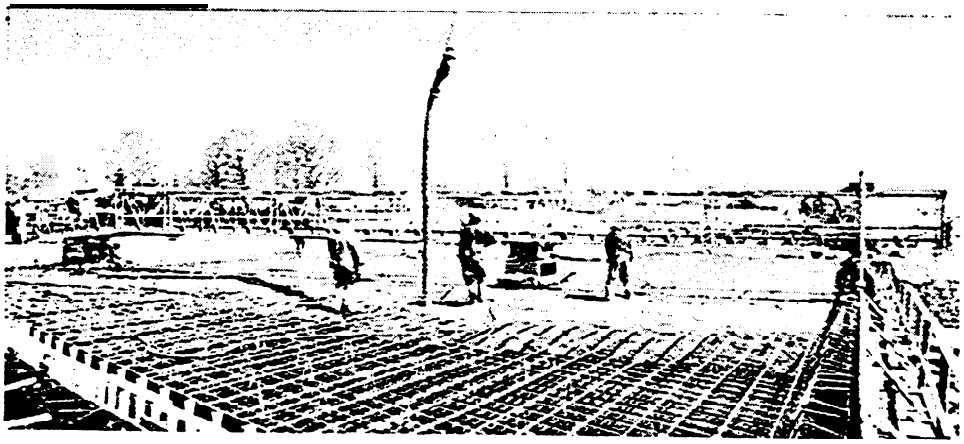
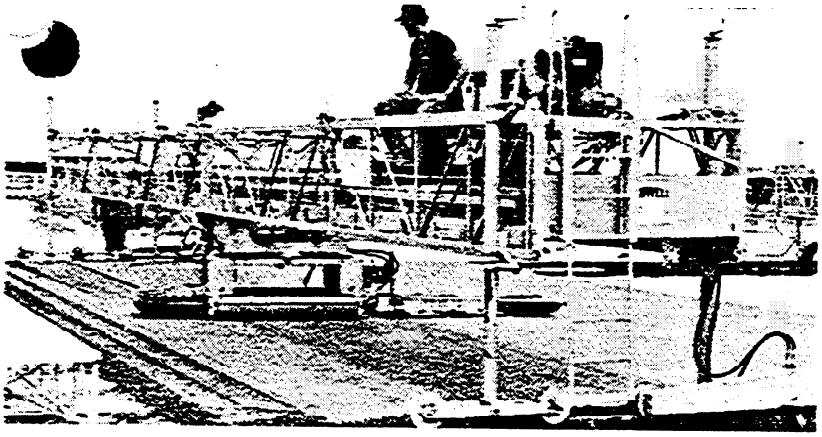
BID-WELL DOES THEM ALL!

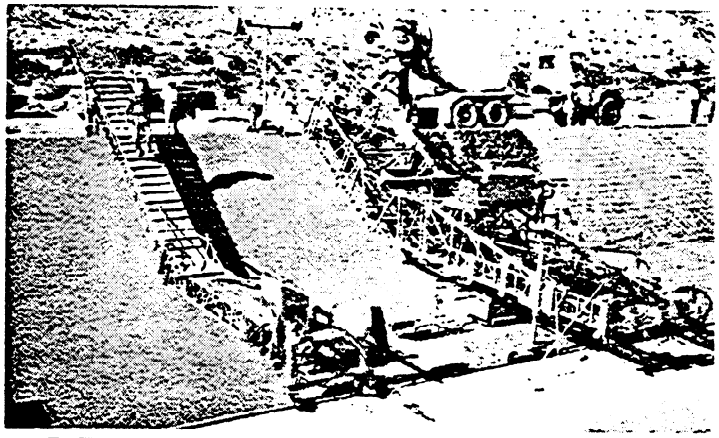


STREETS

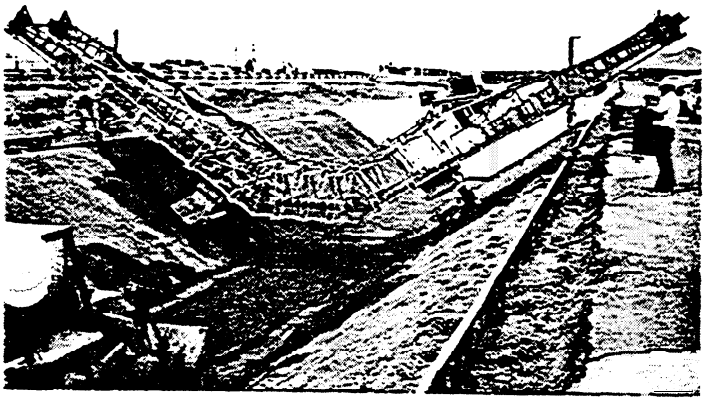


BRIDGES OVERLAYS





HIGHWAYS SLOPES



CANALS

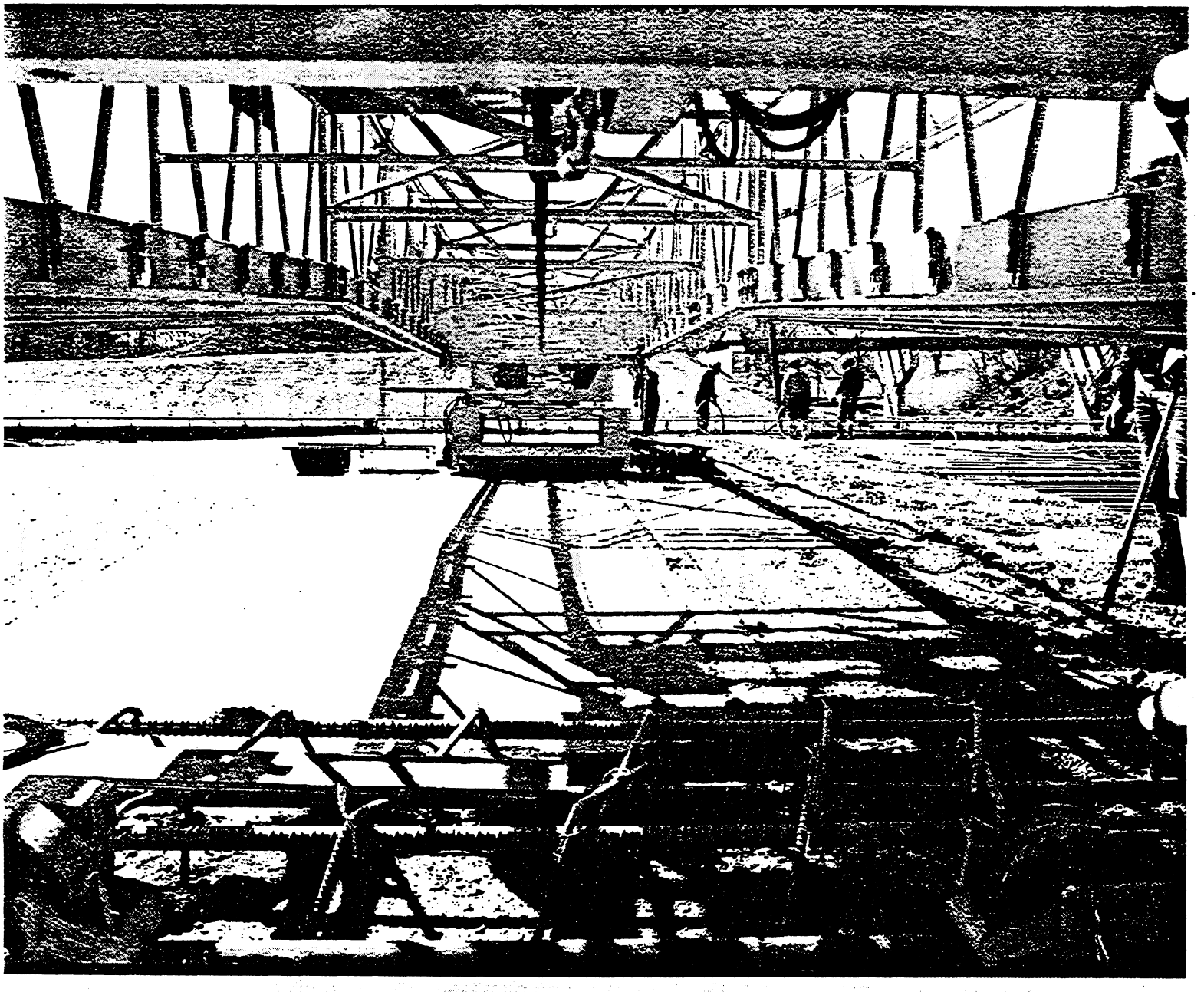
Talk about versatile. Bid-Well does all these concrete finishing jobs - and can trim subgrade as well!

Bid-Well's dual augers plow excess concrete forward on each pass, leaving exactly the proper amount of concrete for an excellent finish. Then double rollers four feet long and 8" in diameter reverse direction of rotation to finish concrete with every pass. Drag plates and burlap drags can complete the surface finishing in one operation.

The Bid-Well molds all crowns - flat, parabolic or inverted. It finishes tapered slabs of varying widths, adjusts to skews up to 45 degrees. finishes high or low slump concrete, finishes super elevations and slopes. It meets all specified tolerances.

Bid-Well has got what it takes for today's concrete finishing. You couldn't ask for more!

BID-WELL Canton, SD 57013
Telephone (605) 987-2603 Telex: (CMI International) 747167



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CMI CORPORATION

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Canton, S.D. 57013

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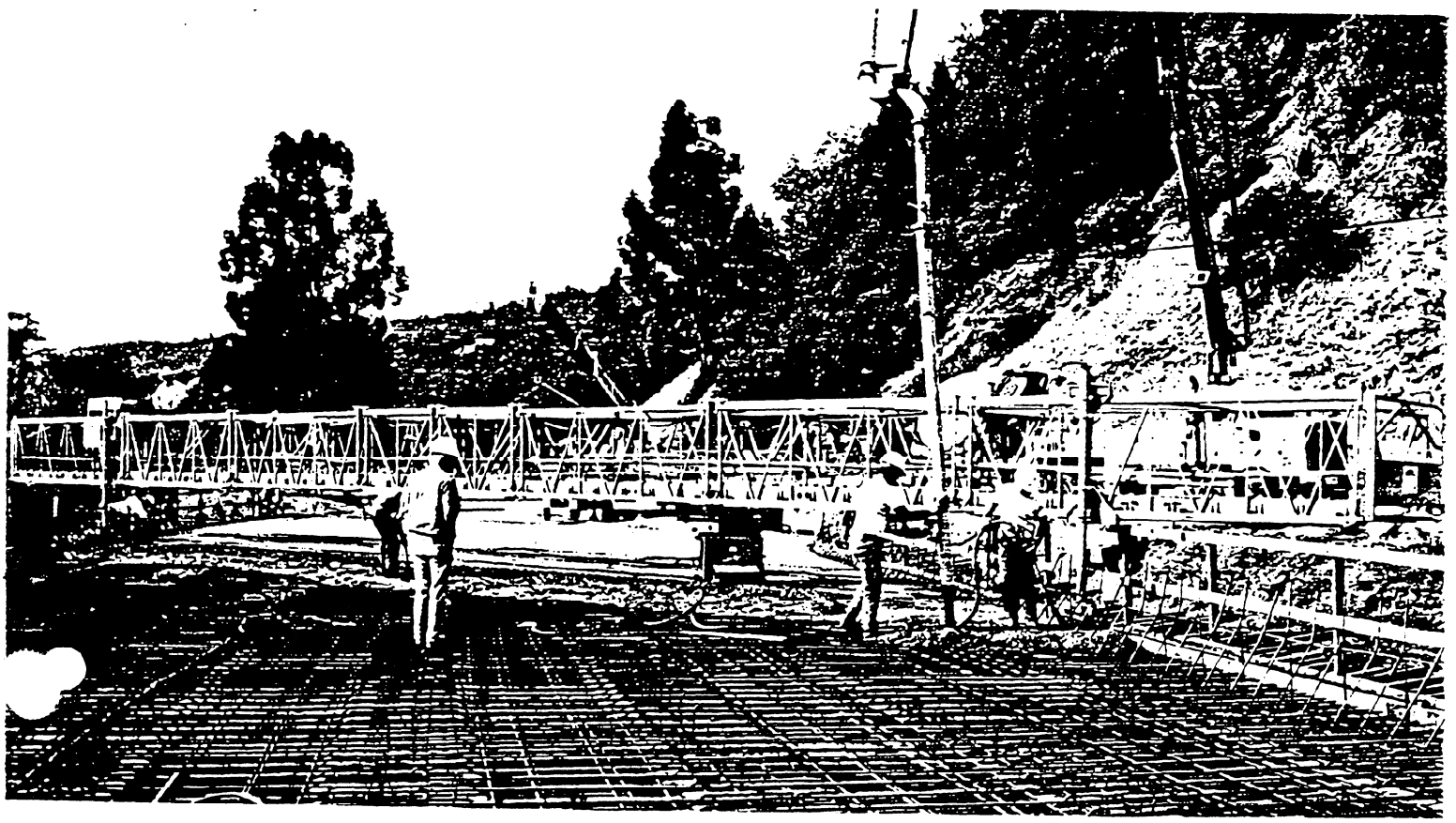
BIDWELL®

CMI CORPORATION

BR & 4800 PAVING SKEWED DECKS



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PRELIMINARY INFORMATION FOR A SKEWED DECK

In paving skewed decks it is essential to have all the job specific&ions and special details before determining what you need to set up your Bid-Well Roller Paver. To aid you there are four questions you will need to answer-

1) What is the skew angle measured perpendicular to center-line? (or 90 degrees to centerline)

2) What is the distance (Measured perpendicular to the center-line of the deck) between the pipe or screed rails?

3) Is the deck super elevated?

4) Is the deck crowned?

DETERMINING MACHINE LENGTH

To determine the length of the machine set at the required skew angle, use the simple equation below. In column (1) find the required skew angle. In column **(2)** multiply that figure by the number of feet from screed rail to screed rail (measured perpendicular to centerline). Add the answer from column (2) to the extra end length of the machine needed to span at that particular skew angle. The extra end length has to be added in order to allow the machine legs to be positioned correctly.

FOR BIDWELL MODEL BR AND **4800 SERIES MACHINES**

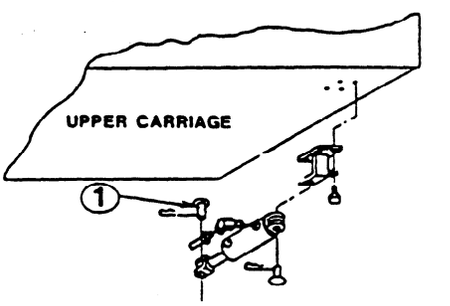
Total machine length required (in feet) = A+B

(1) Skew Angle in Degrees	(2) A Rail to Rail Length in Feet	(3) B Extra Machine End Length in Feet
15	1.04 x w	5 '
20	1.06 x W	5 l/2'
25	1.10 x w	6 l/2'
30	1.15xw	7'
35	1.22 X W	8 '
40	1.31 X W	9 '
45	1.41 X W	10 l/2'
50	1.56 X W	11 l/2'
55	1.74 X W	13 l/2.'

BASIC MACHINE INFORMATION

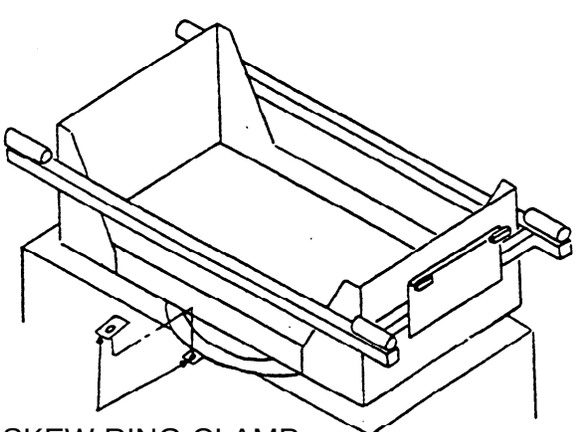
After the truss frame and carriage rail have been straightened according to a standard machine set up, the paving rollers, (which are mounted from a turntable and can be turned to match any machine skewed up to 55 degrees) are now ready to be turned so the paving rollers are parallel to the centerline of deck. Follow the steps below.

1) Mechanically disconnect the hydraulic skew cylinder, if the machine has one (refer to fig. 1) and tie it back out of the way.



REMOVE PIN # 1 **(FIGURE 1)**

2) Rotate the paving rollers so they are parallel to the center-line and lock in position using the skew ring clamps provided. with the machine (refer to fig. 2).

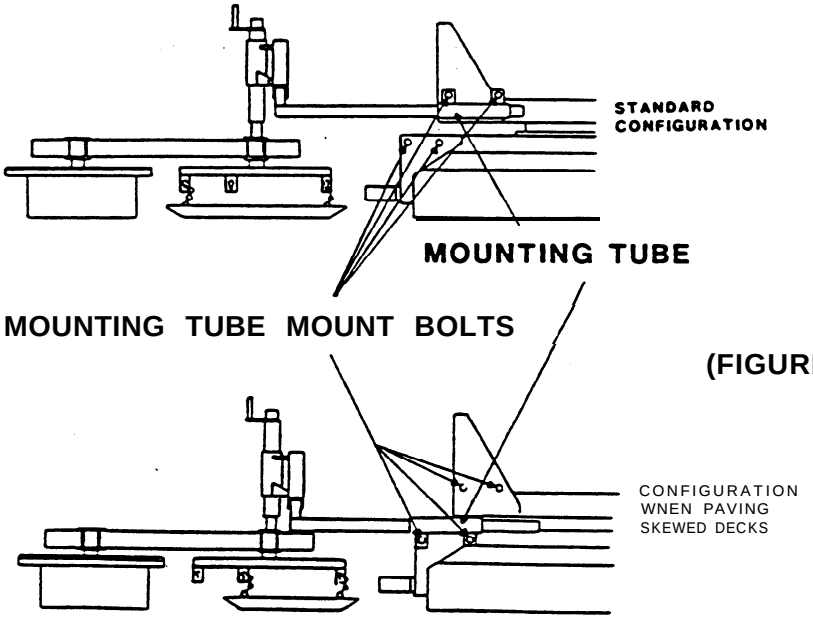


SKEW RING CLAMP **(FIGURE 2)**

CONTINUED....

3) The drag pan hanger system must be removed and remounted on the lower carriage (refer to fig. 3). Remove the bolts that hold the mount tubes on the upper carriage, replace the bolts. Remount the mount tubes to the lower carriage. (The bolts for mounting to the lower carriage are in place on the lower carriage frame).

DRAG PAN MOUNTING CONFIGURATIONS



(FIGURE 3)

4) The drag pan and astro grass or burlap drag H frames will need to be turned so that they are parallel to the machine truss frame. This allows the pan and astro grass or burlap drag to follow the skew angle as the carriage travels across the deck or slab.

5) At this point the paving rollers need to be stringlined to the carriage rail, making the paving rollers paralled to the carriage rail. Being sure to run the stringline across the top of the carriage rail adjacent or parallel to the paving rollers (refer to Roller Paver Set Up Instructions).

FLAT DECKS / SUPERELEVATIONS (NO CROWNS)

When paving flat skewed bridge decks, the machine may either be placed on the skew or perpendicular to the centerline and paving as one wou1d a standard bridge deck, placing the concrete on the skew angle of the deck. No special attachments are required.

If the deck is superelevated, the machine must be placed so paving will be from the low side of the deck to the high side of the deck, noting also that the machine paves from the leading end (must be the low side of the deck) of the machine to the trailing end of the machine (high side of the deck). (Page 5 fig. 4). The roller rotation should be set to rotate in the same direction (paving up hill) and not reversing roller rotation at the end of each carriage pass: This eliminates pulling or moving the concrete from the high side of the deck to the lower side.

CROWNED DECKS

INFORMATION WITH OR WITHOUT SUPERELEVATION....

Review the project specifications and requirements, and determine the skew angle that the machine will be placed on the deck.

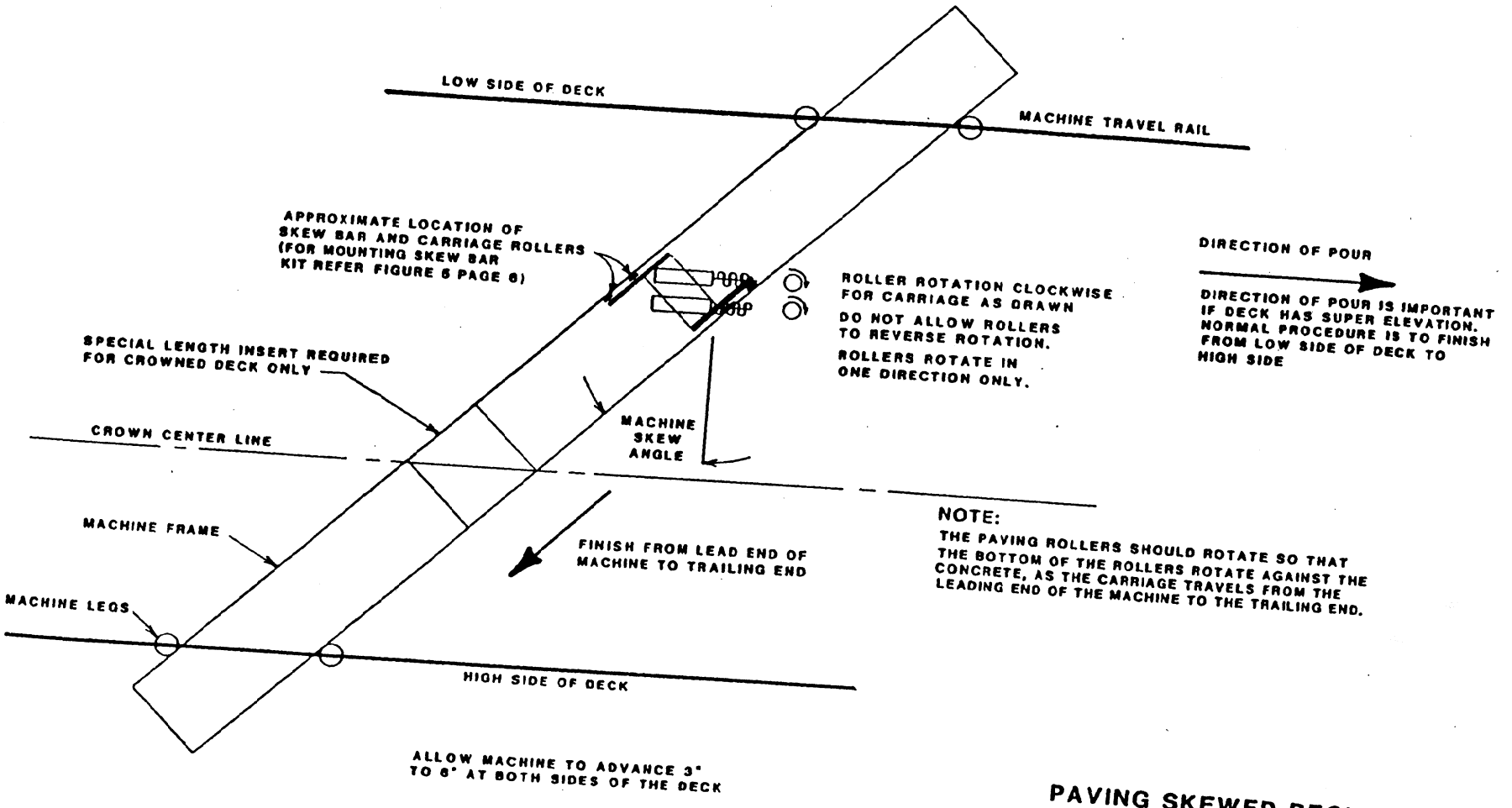
When determining machine lengths for Skewed Decks with a crown, remember all lengths start from the crown line. One side may require different length inserts or sections than the other. (Page 5 fig. 4) This information will also help in determining how the machine is to be placed onto the deck and direction of pour.

If the crowned deck requires a special length insert to be installed and the use of a Skew Bar Kit, the chart below gives the recommended special insert lengths for crowned decks.

BID-WELL RECOMMENDATION

SPECIFICATION SKEW ANGLE (DEGREES)	ACTUAL SKEW ANGLE (DEGREES)	SPECIAL INSERT LENGTH (FEET)
15 20	15	1 l/2'
25	25	3'
30 35	35	4'
40 45	45	6'
50	50	7'
55	53	8'

CONTINUED ON PAGE 6....



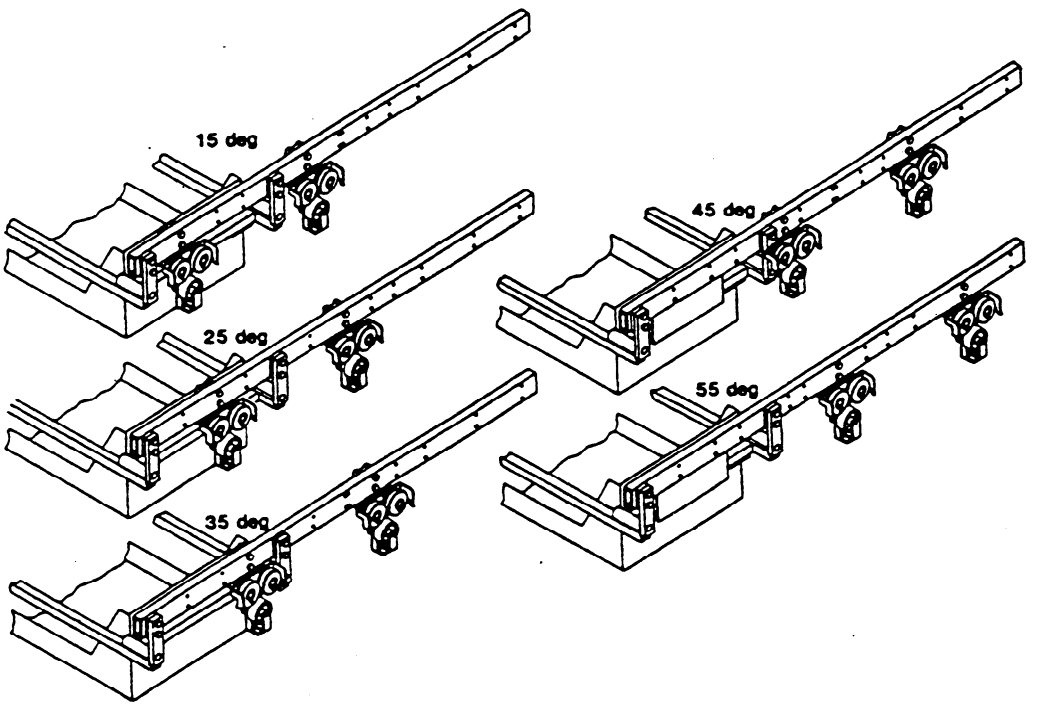
PAVING SKEWED DECKS

(FIGURE 4)

INFORMATION FOR CROWNED DECKS CONTINUED....

The machine frame and carriage rail should be crowned directly above the crown line on opposite corners of the inserts. In some applications and specific skew angles, it may require a special length insert which may be obtained from the factory, (Page 5 fig. 4) NOTE: WHEN PLACING A CROWN INTO THE MACHINE FRAME, REMEMBER TO REMOVE THE BOLTS IN THE DIAGONAL ANGLE BRACES IN THE SECTION BEING CROWNED.

When paving skewed decks with a crown either superelevated or not, Bid-Well recommends the use of a Skew Bar Kit, that attaches to the Upper Carriage. This allows the carriage rollers to become off-set 30 as the carriage passes through the crown; the paving rollers pass over the crown line parallel to the crown line. The Skew Bar Kit comes predrilled for skew angles 15 degrees through 55 degree increments. (Page 6 fig. 5). If a Skew Bar Kit is required and field installed, it may be advantageous to remove the carriage, install the Skew Bar Kit, and reinstall the carriage when the machine frame is split to install additional machine inserts.



(FIGURE 5)

SKEW BAR KIT -

INSTALLATION INSTRUCTIONS....

1. Remove the carriage assembly from the machine and block up the carriage so that the carriage weight does not rest on the paving rollers.

2. Remove or deactivate the carriage skew cylinder, if one is installed on the carriage.+ The skew cylinder is optional equipment on some machine models.

3. Remove the carriage wheel pivot assemblies from the carriage hanger frame (Item A) and retain for reinstallation. (Figure 6, Page 7).

4. If the skew angle is less than 45 degrees, 'it will be necessary to remove the chain tightener plates from the side of the carriage hanger frame. See (Item"B") (Figure 6, Page 7), chain tightener plates for future use, should the Skew Bar Kit ever be removed,

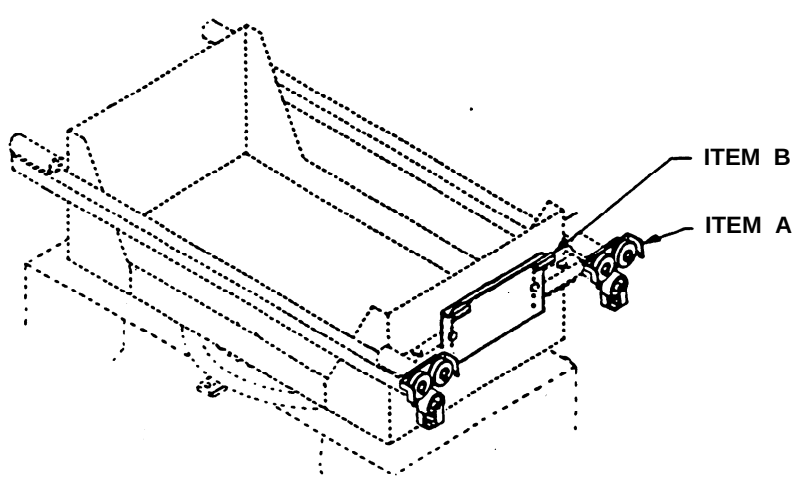
5. Install the tube mount brackets into the Upper Carriage Frame and mount the Skew Bar Tubes at the locations marked "Base", as shown on (Figure 7, Page 8).

6. Install the carriage wheel mounts onto the Skew Bars at the bolt holes that match the angle determined for this project. (Figure 5, Page 6).

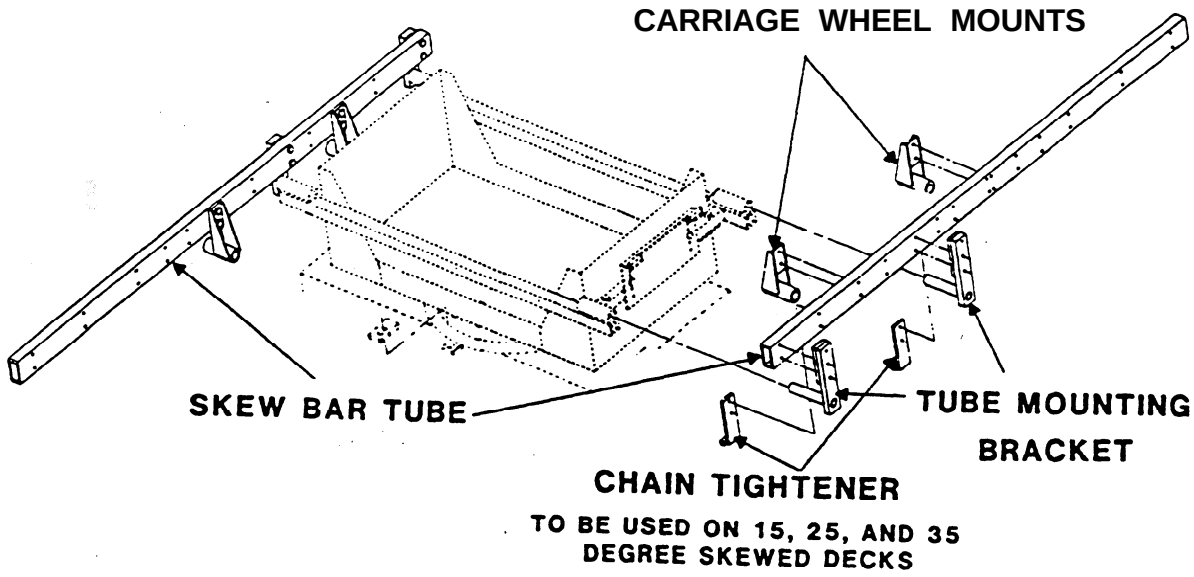
7. Install the carriage wheel pivot assemblies that were removed in step 3, onto the wheel mounts on the skew bars,

8. Install the complete carriage assembly, with Skew Bar Kit, into the machine frame. If the carriage assembly, with Skew Bar Kit, is to be installed from the end of the machine, it will be necessary to loosen and pivot up; or remove the machine idler end frame panel.

NOTE: When ordering parts, have machine model and serial number available.



(FIGURE 6)



(FIGURE 7)

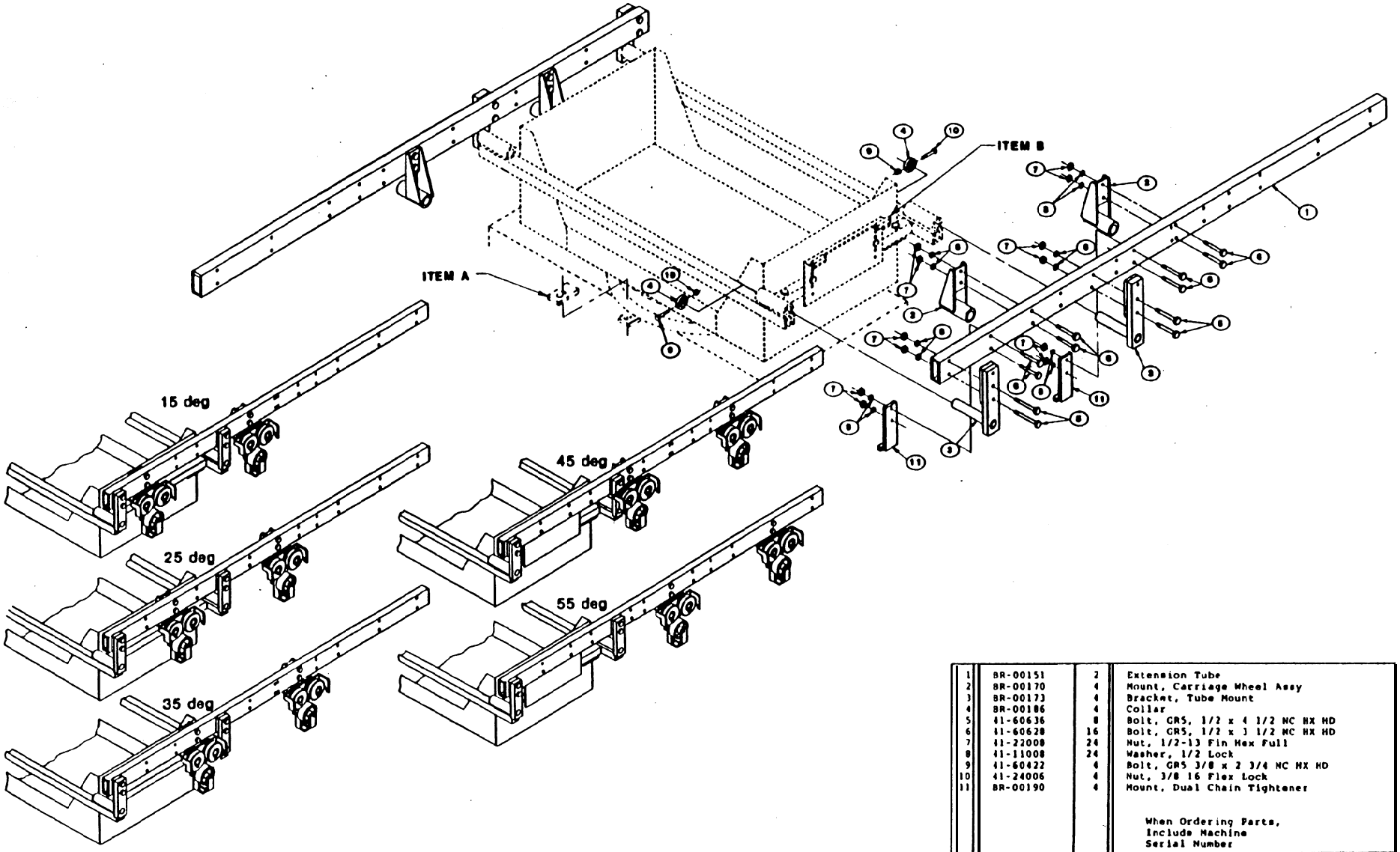
MACHINE OPERATION

The paving roller(s) must always turn in only one direction, when paving skewed decks. See (Page 5, fig. 4) for the correct direction of rotation for the finishing rollers). The rotation of the rollers should be set so that they finish the concrete only when the carriage travels from the leading end of the machine to the trailing end, Do not allow rollers to reverse rotation.

After the pour has started and the machine has moved out from the end bulkhead or has passed over the bulkhead' the full length of the paving rollers, raise the back of the machine l/8" by turning the back leg cranks l/2 turn counter clockwise. This will keep the rear of the paving rollers from digging in and leaving a small ridge of concrete.

It may be necessary to readjust the augers up or down to obtain or reduce the roll of concrete (optimum is golf ball size in diameter at the front of the paving rollers). As the machine progresses into the pour and clears the bulkhead or end dam, attach the drag pan and astro grass or burlap drag.

When paving concrete going up hill, the back or rear of the machine should be raised slightly more than l/8". When paving down hill, the rear of the rollers should be lowered by using the rear leg cranks so there is nearly total contact of the paving rollers onto the slab or deck surface. The optimum roller setting is to have maximum surface contact, but not to leave a ridge or line of concrete coming off the rear of the paving rollers.



1	BR-00151	2	Extension Tube
2	BR-00170	4	Mount, Carriage Wheel Assy
3	BR-00173	4	Bracket, Tube Mount
4	BR-00186	4	Collar
5	41-60636	8	Bolt, GR5, 1/2 x 4 1/2 NC HX HD
6	41-60628	16	Bolt, GR5, 1/2 x 1 1/2 NC HX HD
7	41-22008	24	Nut, 1/2-13 Fin Hex Full
8	41-11008	24	Washer, 1/2 Lock
9	41-60422	4	Bolt, GR5 3/8 x 2 3/4 NC HX HD
10	41-24006	4	Nut, 3/8 16 Flex Lock
11	BR-00190	4	Mount, Dual Chain Tightener

When Ordering Parts,
Include Machine
Serial Number

KEY	PART NO	QTY	DESCRIPTION

BID-WELL CORPORATION
CANTON, SO DAK. 57013

DRAWN MLH	DATE 9/87	TITLE **SKEW BAR KIT**	
REVISED			
APP'D		KLUST NO	SHEET / PAGE NO

BIDWELL®

MACHINE LOAD WEIGHTS FOR BR & 4800 SERIES

BIDWELL P.0. BOX 97 CANTON, SOUTH DAKOTA 57013 AREA CODE 605 PHONE 987-2603 TELEX 295001 FAX 605987-2605

5.6 MACHINE WEIGHTS

5.6.1 DEAD LOADS FOR 4800 AND BR MACHINES

5.6.1.1 BASIC MACHINE WEIGHTS

Table 1 lists the weights of basic 4800 & BR Series Bid-Well Roller Finishers, as assembled at the factory from various length-insert sections. The weights in Table 1 do not include-the weight of the carriage or any accessories.

TABLE 1

BASIC MACHINE CONFIGURATION	WEIGHT
2-12 Foot Sections.	4304 lbs
2-12 Foot & 2-6 Foot Sections	5468 lbs
3 -- 12 Foot Sections	5180 lbs
2 -15 Foot Sections	4472 lbs
2 -45 Foot & 1 -6 Foot Sections	5O54 lbs
2 -18 Foot Sections	5000 lbs

The basic weight of your machine, Model _____, Serial Number _____ , is _____ lbs. as assembled at the factor;. Insert this weight into the total weight column on line 1, page 5-9. Divide the total weight by 8 (the number of machine wheels), to obtain the weight per wheel on the Idler End and the power Unit End of the machine.

5.6.1.2 MACHINE INSERT SECTION WEIGHTS

'Table 2 lists the weights of the various lengths of machine insert sections, complete with braces, carriage travel chain, and hydraulic hose.

TABLE 2

LENGTH OF SECTION	WITH LEG RAIL	WITHOUT LEG RAIL
3 Foot	381 lbs	360 lbs
6 Foot	582 lbs	540 1bs
12 Foot	876 lbs	792 lbs
15 Foot	960 lbs	840 lbs
18 Foot	1224 lbs	1080 lbs

Determine the number of each length and type of insert sections that are going to be added to the basic machine. Add the weights of those sections, to obtain the total weight of extra inserts. Place this weight into the total weight column on line 2, page 5-9. Divide the total weight by 8. to obtain the weight per wheel on the Idler End and the Power Unit End of the machine.

5.6.1.3 WEIGHT OF MACHINE ACCESSORIES

Table 3 lists the ADDITIONAL weights that various machine accessories add to the weight of the basic machine. These weight figures take into consideration, any basic machine parts that the accessory replaced.

TABLE 3

MACHINE ACCESSORY		ADDITIONAL WEIGHT
4″ Plate Leg Mounts	(Set of 4)	224 lbs
4″ Swingout legs (1 end)	(Set of 2)	180 lbs
4″ Swingout Legs (2 ends)	(Set of 4)	360 lbs
6" Plate Leg Mounts 8 Legs	(Set of 4)	348 lbs
6″ Swingout Legs (1 end)	(Set of 2)	240 lbs
6″ Swingout Legs (2 ends)	(Set of 4)	480 lbs
Powered Crown Adjuster		330 lbs
Manual Crown Adjuster		66 lbs
Power Widening. (1 end of machine)		170 lbs
Power Widening (2 ends of machine)		340 lbs
Power Leg Screws	(Set of 4)	160 lbs
Towing Tongue		105 lbs
23 HP Engine		50 1bs

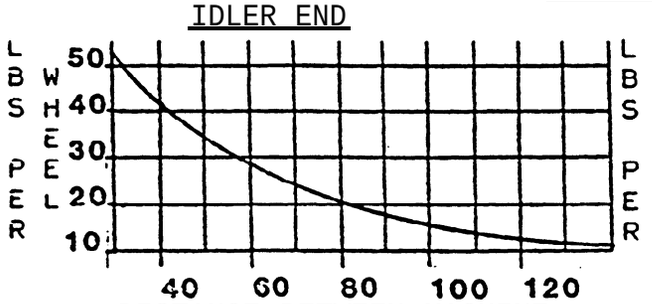
Determine which accessories are going to be installed on the basic machine. Add the additional weights of those accessories, to obtain the total additional weight of accessories. Place this weight into the total weight column on line 3, page 5-9. Divide the total weight by 8, to obtain the weight per wheel on the Idler End and the Power Unit End of the machine.

5.6.1.4 WEIGHT OF POWER-FOLD DOLLY

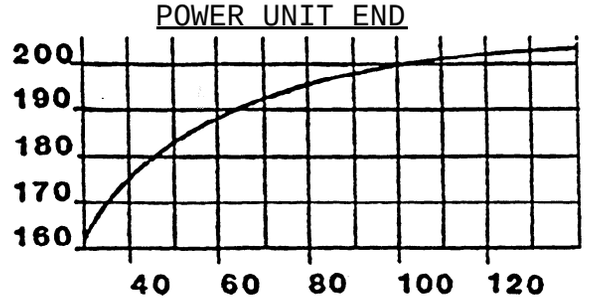
If your machine is NOT equipped with a Power-Fold Dolly, disregard table 4. Table 4 is composed of two graphs, showing the additional weight contributed by the Power-**Fold** Dolly. for the Idler End of the machine and the Power Unit End of the machine. Before using Table 4. determine the distance between the machine travel rails. in **feet.**

TABLE 4

IDLER END



POWER UNIT END



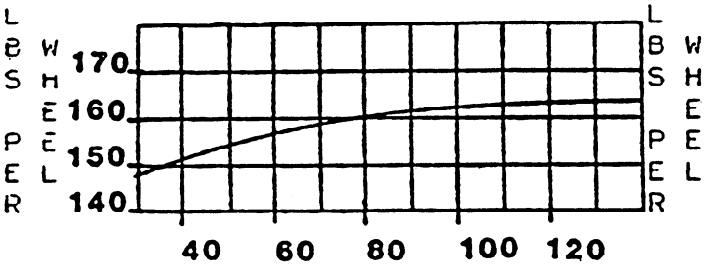
Enter the total weight of the Power Fold Dolly, 865 lbs. into the total weight column of line 4. page 5-9. find the wheel loads for the Idler End and Power Unit End from the graphs, and enter those loads into the proper columns of line 4, page 5-9.

5.6- 1.5 WEIGHT OF STEERABLE NOSE WHEEL

Table 5 is composed of two graphs, showing the additional weight contributed by the Steerable Nose Wheel, for the idler End if the machine and the Power Unit End of the machine. Before using Table 4. determine the distance between the machine travel rails, in feet.

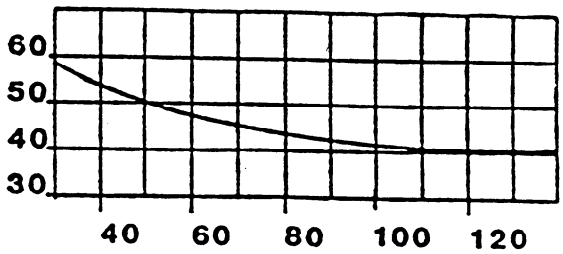
TABLE 5

IDLER END



DISTANCE BETWEEN MACHINE TRAVEL RAILS IN FEET

POWER UNIT END



DISTANCE BETWEEN MACHINE TRAVEL RAILS IN FEET

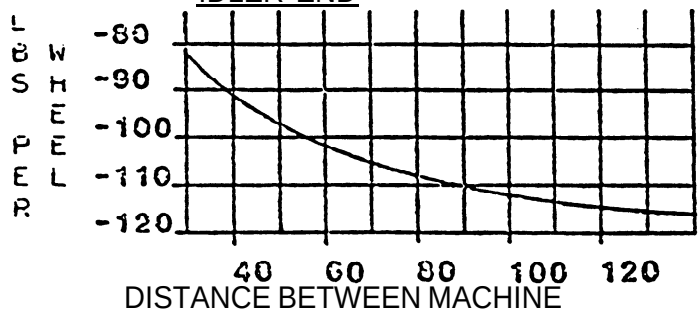
Enter the total weight of the Steerable Nose Wheel, 818 lbs. into the total weight column of line 5. page 5-9. Find the wheel loads for the Idler End and Power Unit End from the graphs and enter those loads into the proper columns of line 5, page 5-9.

5.6.1.6 WEIGHT TRANSFER OF POWER UNIT

Table 6 is composed of two graphs. One graph lists the ADDITIONAL weight that the Power Unit adds to the wheel load on the Power Unit End of the machine. The second graph lists the weight to be DEDUCTED from the idler End of the machine, The total weight of the Power Unit is INCLUDED in the basic machine weight. The longer the total length of the machine, the more the Power Unit weight is transferred to the Power Unit End of the machine, and away from the Idler End of the machine.

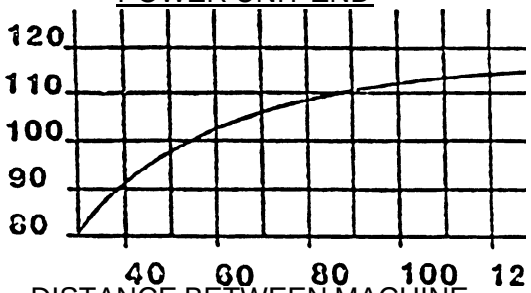
TABLE 6

IDLER END



DISTANCE BETWEEN MACHINE TRAVEL RAILS IN FEET

POWER UNIT END



DISTANCE BETWEEN MACHINE TRAVEL RAILS IN FEET

Find the wheel loads for the Idler End and Power Unit End from the graphs, and enter those loads into the proper columns of line 6. page 5-9.

5.6.2 LIVE LOADS FOR 4800 AND BR SERIES MACHINES

The- finishing carriage, carriage accessories. and the machine operator are considered live loads, because they move from one end of the machine to the other. Therefore, it is necessary to figure that the entire weight of these live loads will be carried by only one end of the machine,

5.6.2.1 BASIC CARRIAGE WEIGHT

Table 7 lists the weights of basic 4800 & BR Series Bid-We11 Roller Finishing Carriages, as assembled at the factory. The weights in Table 7 do not include the weight of any carriage accessories.

TABLE 7

BASIC CARRIAGE	WEIGHT
48101, 48102, BR-101, & BR-102, Single Roller .	1480 lbs
48201, 48202, BR-201, & BR-202, Dual Roller . .	1580 lbs
48202HD & BR-202HD, Dual Roller	1732 lbs

Enter the weight of the basic carriage into the total weight column on line 7, page 5-9. Divide the total weight by 4, to obtain the weight per wheel on the Idler End and the Power Unit End of the machine.

5.6.2.2 WEIGHT OF CARRIAGE ACCESSORIES

Table 8 lists the ADDITIONAL weights that various carriage accessories add to the weight of the basic carriage. These weight figures take into consideration. any basic carriage parts that the accessory replaced.

TABLE 8

ACCESSORY	ADDED WEIGHT	ACCESSORY	ADDED WEIGHT
2nd Drag Pan	(*) 70 lbs	Lift Device	245 lbs
Side Thrust Rollers	(*) 56 lbs	Skew Bar Kit	250 lbs
Latex Pan Vib.	115 lbs	23 HP Engine	50 lbs
4000 Pan Vib.	142 lbs	5500 Spud Vib.	397 lbs
Rol1er Tamper	225 1bs	Vib. Joint Cutter	273 lbs
Trimming Blades (Pair)	502 lbs	(*) Incl. in HD Carriage Weight	

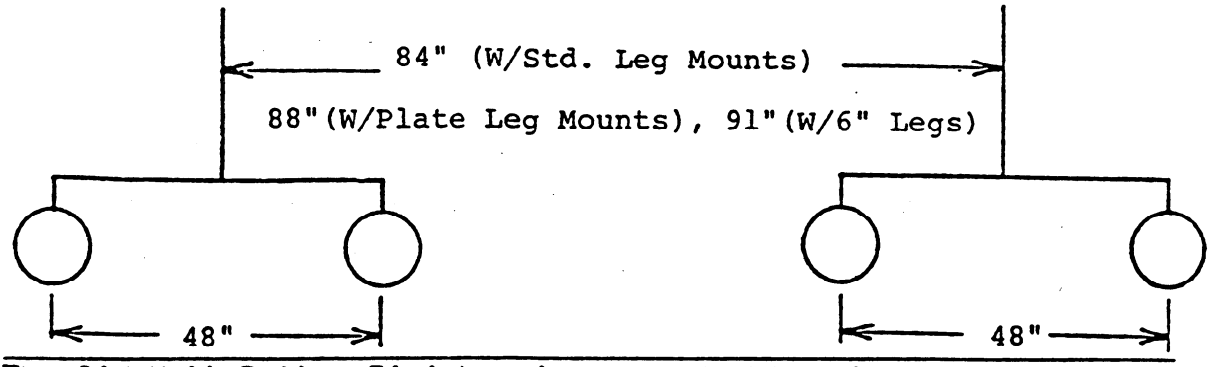
Determine which accessories are going to be installed on the basic carriage. Add the additional weights of those accessories, to obtain the total additional weight of accessdries, Place this weight into the total weight column on line 8, page 5-9. Divide the total weight by 4, to obtain the weight per wheel on the Idler End and The power Unit End of the machine,

5.6.2.3 MACHINE OPERATOR

A weight of 200 pounds has been used as an estimate for a typical operator. If your operator Is heavier than 200 pounds, enter the appropriate weights in line 9, page 5-9. if people, other than the operator, are required to be on the machine, their weights should also be included.

5.7 WHEEL LOADS

5.7.1 BR AND 4800 SERIES MACHINES



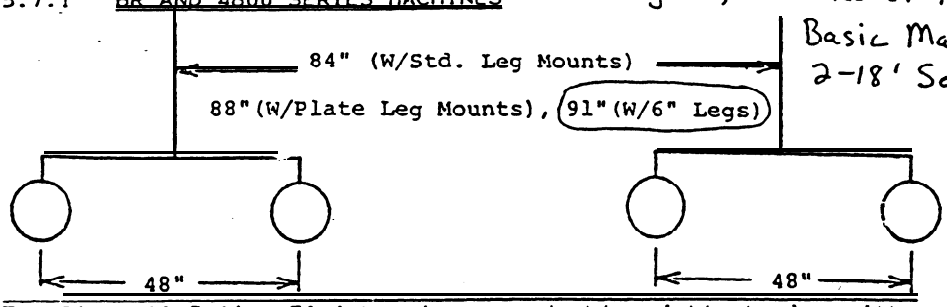
The Bid-Well Roller Finisher is supported by eight wheels, with four to each side as shown above.

	TOTAL WEIGHT lbs		IDLER END lbs/wheel	POWER UNIT END lbs/wheel
DEAD LOADS				
1. Basic machine weight, see Table 1, page 5-5.	_____	/8	_____	_____
2. Add for extra inserts, see Table 2, page 5-5.	_____	/8	_____	_____
3. Add for machine accessories, Table 3, page 5-6.	_____	/8	_____	_____
4. Add for Power-Fold Dolly, see Table 4, page 5-6.	_____		_____	_____
5. Add for Steerable Nose Wheel. Table 5, page 5-7.	_____		_____	_____
6. Add for Stationary Power Unit being closer to one end, Table 6, page 5-7.	XXXXXX		-_____	+_____
LIVE LOADS				
7. Basic Carriage Weight, see Table 7, page 5-8.	_____	/4	_____	_____
8. Add for carriage accessories, Table 8, page 5-8.	_____	/4	_____	_____
9. Add for Machine Operator, see paragraph 5.6.2.3.	200	/4	50	50
TOTAL WEIGHTS (Lines 1 thru 9)	_____ (Pounds)		_____ (lb/wheel)	_____ (lb/wheel)

Sample Calculation for 48', BR-202 with 6" legs, Manual Crown Adjuster, Dual Drag Pans, Power Fold Dolly, 23 hp engines, and Roller Tamper.

5.7 WHEEL LOADS

5.7.1 BR AND 4800 SERIES MACHINES



Basic Machine, 2-18' Sections

The Bid-Well Roller Finisher is supported by eight wheels, with four to each side as shown above.

	TOTAL WEIGHT lbs		IDLER END lbs/wheel	POWER UNIT END lbs/wheel
DEAD LOADS				
1. Basic machine weight, see Table 1, page 5-5. (2-18' Sections)	5000	/8	625	625
2. Add for extra inserts, see Table 2, page 5-5. (2-6' with leg rail)	1164	/8	145½	145½
3. Add for machine accessories, Table 3, page 5-6. (6" Legs, Man. Crown Adj., 23 hp engine)	464	/8	58	58
4. Add for Power-Fold Dolly, see Table 4, page 5-6. (44' Between Mach. Travel Rails)	865		38	179
5. Add for Steerable Nose Wheel. Table 5, page 5-7.	—		—	—
6. Add for Stationary Power Unit being closer to one end. Table 6, page 5-7.	XXXXXX		- 95	+ 95
LIVE LOADS				
7. Basic Carriage Weight, see Table 7, page 5-8. (BR-202 Carriage)	1580	/4	395	395
8. Add for carriage accessories, Table 8, page 5-8. (2nd Drag Pan, 23 hp Eng., Roller Tamper)	345	/4	86¼	86¼
9. Add for Machine Operator, see paragraph 5.6.2.3.	200	/4	50	50
TOTAL WEIGHTS (Lines 1 thru 9)	9618 (Pounds)		1311¾ (lb/wheel)	1633¾ (lb/wheel)